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# Before the FEDERAL COMMUNICATIONS COMMISSION Washington, D.C. 20554

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In the Matter of:	)	FEDERAL COMMUNICATIONS COMMISSICIE OFFICE OF THE SECRETARY
Joint Application of AT&T Corporation and Tele-Communications, Inc. for Transfer of	)	CS Docket No. 98-178
Control to AT&T of Licenses and	)	
Authorizations Held By TCI and Its Affiliates Or Subsidiaries	)	RECEIVED

FEDERAL COMMUNICATIONS COMMISSION OFFICE OF THE SECRETARY

OCT 2 9 1998

#### **COMMENTS IN OPPOSITION OF GTE**

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#### **COMMENTS IN OPPOSITION OF GTE**

GTE Service Corporation and its below-listed affiliates<sup>1</sup> (collectively, "GTE") hereby file their comments in opposition to the proposed acquisition of TCI by AT&T.<sup>2</sup> As detailed herein, GTE is gravely concerned that, due to the lack of open access to TCI's broadband cable network, the merger of AT&T and TCI would constrain customer choice and impede competition in the emerging market for bundled video programming distribution, high-speed Internet access, ISP content, and telecommunications services. Accordingly, under the governing *Bell Atlantic/NYNEX* standard, the merger cannot be

<sup>&</sup>lt;sup>1</sup> GTE Alaska, Incorporated, GTE Arkansas Incorporated, GTE California Incorporated, GTE Florida Incorporated, GTE Hawaiian Telephone Company Incorporated, The Micronesian Telecommunications Corporation, GTE Midwest Incorporated, GTE North Incorporated, GTE Northwest Incorporated, GTE South Incorporated, GTE Southwest Incorporated, Contel of Minnesota, Inc., GTE West Coast Incorporated, and Contel of the South, Inc., GTE Communications Corporation, GTE Wireless Incorporated, GTE Internetworking, and GTE Media Ventures Incorporated. These comments pertain to issues raised by the proposed transfer of CARS licenses held by TCI and its subsidiaries and affiliates.

<sup>&</sup>lt;sup>2</sup> GTE files these comments pursuant to the Commission's Public Notice, "AT&T Corporation and Tele-Communications, Inc. Seek FCC Consent for a Proposed Transfer of Control," DA 98-1969 (rel. September 29, 1998).

approved unless the Applicants commit to afford nondiscriminatory access to TCI's broadband cable facilities to all information service providers. In addition, if AT&T/TCI provides telecommunications services over cable facilities, it must be regulated in the same manner as the ILECs in order to assure regulatory parity and permit fair competition. Specifically stated, it would be an abuse of discretion for the Commission to approve the instant merger to the extent that it would countenance asymmetric regulation of the giant, merged AT&T/TCI (cable and telecommunications) entity vis-à-vis incumbent local exchange carriers.

#### I. INTRODUCTION AND SUMMARY

A. The Commission Must Address the Grave Competitive Concerns Raised By this Merger in a Direct and Forthright Fashion.

Today, there are two wires leading into the homes of millions of Americans. One wire is provided by the incumbent local exchange carrier ("ILEC") for narrowband services such as voice and data. The second wire is provided by the cable television company for services that currently include data, video and video programming and will soon include voice. Paradoxically, the ILEC wire into the home is subject to a host of regulatory requirements that open their lines for consumers and competitors while the cable broadband line is under no such constraints.

As the Commission is well aware, AT&T and TCI have publicly acknowledged their intent to exploit their control over the broadband line. They have made clear that leveraging of this monopoly power into other markets is a primary goal of the merger. They have stated that competing information service providers will not get access to

their cable systems except on terms they dictate. They have been unequivocal that their cable subscribers must pay for their @Home service just to access other information service providers. And, they will not even contemplate access to their monopoly facilities by other telecommunications carriers.<sup>3</sup>

The solution to AT&T/TCl's brazenly anticompetitive designs is for the FCC to address the specific and deleterious ramifications of the merger in a direct and forthright fashion. The public interest cannot be well-served if the only provider of monopoly cable television service and broadband cable Internet access is free to deny consumer choices. Nor can the public interest be well-served if the monopoly provider of cable services is free to refuse reasonable access by information service competitors to its broadband line. And, the public interest certainly is not well-served if the largest cable television operator in the country combines with the largest telecommunications company in the country in a grand scheme intended to leverage the combined entity's monopoly over the broadband loop into other product markets.

<sup>3</sup> This strategy is eerily reminiscent of that pursued by AT&T in the early days of the Bell System: "In the face of competition, Bell refused to interconnect its lines with its competitors' lines. Since AT&T controlled the telephone service in many large cities, and generally the long distance circuits connecting these cities, communities not served by the Bell System were isolated from other communities." Report by the Federal Communications Commission on Domestic Telecommunications Policies, September 27, 1976, at Attachment B at 6; see also Peter Temin, THE FALL OF THE BELL SYSTEM 10 (1987), Max D. Paglin, A LEGISLATIVE HISTORY OF COMMUNICATIONS ACT OF 1934, at 8, 42 n.132 (1989). The conditions GTE seeks herein are intended to guard against replication of the experience in the telephone market, where once-vigorous competition in local telephone services was wiped out in a relatively short period of time.

As summarized below and detailed in the ensuing comments, the Commission has no alternative but to condition the merger in two critical respects to overcome its inherent anti-competitive effects. First, AT&T/TCI must be required as a condition of the merger to unbundle its broadband cable Internet access services for competing information service providers. Second, to the extent that cable facilities are used to provide local or long distance telecommunications service, AT&T/TCI must be subject to the same Title II obligations imposed upon competitors such as GTE and other ILECs.

B. The Merger of AT&T and TCI Would Create a Company with Market Power Spanning Virtually Every Communications Service.

TCI is an existing monopolist in the cable market, an emerging monopolist in the broadband Internet access market, and an aspiring monopolist in the Internet service provider ("ISP") market. It is essentially the sole source of multichannel video programming for over twenty million households. AT&T has an equally pervasive presence. Fourteen years after divestiture, it retains over 60 percent of the residential long distance market – over 100 million customers nationwide. It also provides its WorldNet Internet access service to more than a million subscribers, owns Internet backbone facilities in 11 major cities, recently acquired TCG, the largest competitive LEC, and is one of only three national commercial mobile radio service operators.

<sup>&</sup>lt;sup>4</sup> See Federal Communications Commission, Long Distance Market Shares: First Quarter 1998 at 5, 9 (Industry Analysis Div., CCB June 1998) (Long Distance Market Shares (June 1998)).

Together, AT&T and TCI will be the leading provider in no fewer than three separate communications product markets: multi-channel video programming, high-speed Internet access, and long distance telephony. Moreover, the Applicants have announced aggressive plans to offer local IP telephony over cable, not just on TCI's systems but on those owned by Time Warner as well<sup>5</sup>—reaching over 24 million subscribers and passing nearly 40 million homes.<sup>6</sup> And, through TCI's controlling stake in @Home, the combined company will dictate the first-choice ISP for any TCI cable subscriber wishing to use cable modem service.

Putting all the pieces together, AT&T/TCI will control numerous essential inputs into the bundled service packages that consumers increasingly are demanding. Of greatest concern, no other company will be able to match AT&T/TCI's ability to provide essentially ubiquitous high-speed Internet access. Such access unquestionably is the linchpin of a successful service bundle; without it, a customer has no reason to change his or her current ISP or telecommunications carrier. Thus, not only will the giant, combined entity be able to offer "the first fully integrated package of communications,

<sup>&</sup>lt;sup>5</sup> Eben Shapiro, "Connections: Time Warner, AT&T Discuss Phone Venture," *Wall Street J.*, October 22, 1998, at B1 ("Time Warner Inc. and AT&T Corp. are negotiating a sweeping deal that would give the long-distance giant access to Time Warner's vast network of cable systems as part of an ambitious plan to go up against the Bell operating companies in the local phone business.").

<sup>&</sup>lt;sup>6</sup> See Applications of Teleport Communications Group, Inc., Transferor, and AT&T Corp., Transferee, CS Docket No. 98-178, at 6 (filed September 14, 1998) ("Description of Transaction") and (visited October 29, 1998) <a href="http://www.pathfinder.com/corp/fbook/fbcable1.html">http://www.pathfinder.com/corp/fbook/fbcable1.html</a>.

electronic commerce, and video entertainment services," but in many areas and for a considerable time it will be the only company that can do so – solely due to its refusal to permit competitors to use its broadband access network, which bears every hallmark of an "essential" facility under the antitrust laws.

## C. To the Extent the Merged Company Provides Telephony over its Cable Facilities, it Must Be Regulated Similarly to ILECs.

There can be no doubt that, to the extent AT&T/TCI offers telecommunications over its cable networks, it is subject to the interconnection obligations of Sections 201 and 251(a). Likewise, AT&T/TCI will be subject to the resale, reciprocal compensation, access, and other obligations of Section 251(b) to the extent it provides exchange or exchange access services. More, however, is needed to assure that the merged company does not exercise market power in the telecommunications markets: regulatory parity demands that AT&T/TCI be regulated under the same terms that apply to the ILECs.

Quite simply, AT&T/TCI, due to the strength of the merged company across virtually every communications product market, rapidly will be able to establish itself as a dominant provider of all manner of telecommunications services. Leveraging from its power in the high-speed Internet access market, AT&T/TCI's wire into the home will be no less a bottleneck (and often will be more of one) than the ILEC's local loop would be (if unregulated). Under current rules, however, the ILECs are uniquely subject to

<sup>&</sup>lt;sup>7</sup> AT&T/TCI Press Release, "AT&T, TCI to Merge, Create New AT&T Consumer Service Unit," June 24, 1998 (visited October 28, 1998) <a href="http://www.att.com/press/0698/980624.cha.html">http://www.att.com/press/0698/980624.cha.html</a>.

unbundling, discounted resale, interconnection, equal access, cost allocation, and affiliate transaction restrictions (among others) that will prevent them from competing effectively against AT&T/TCI.

If pervasive regulation is needed for the ILECs, it must likewise be needed for AT&T/TCI; there is no rational basis to afford AT&T/TCI more favorable treatment.

Consequently, the Commission must either extend similar obligations to AT&T/TCI (and not permit the merger to close until those rules are in effect) or relieve the ILECs from these burdens. Maintaining the current disparate regulatory regime would be arbitrary and would irrevocably distort competition.

D. The Merger Will Produce Anticompetitive Results in the Emerging Bundled Services Market Because of AT&T/TCl's No-Access Policy.

The emerging bundled services market promises to yield substantial consumers benefits. Customers will enjoy the convenience of one-stop shopping and single-source billing as well as an array of service packages. Today, this nascent market is competitive; notably, no entity or group of entities can exercise market power. The merger of AT&T and TCI, however, would drastically alter this picture. By combining TCI's monopoly cable system, broadband access facilities, and exclusive arrangements with @Home with AT&T's massive presence in telecommunications and ISP markets, the merger would enable the new company rapidly to foreclose competition in this market in the absence of regulatory safeguards such as the equal access, resale, and unbundling obligations that apply to the ILECs.

AT&T and TCI have made no bones about the fact that they intend to leverage their control of broadband access for all it is worth. As TCI's CEO, John Malone, recently boasted, any competitor "needs to subscribe to our network to get to their customers at high speed. They have to go through us." Indeed, TCI's President, Leo Hindery, recently reiterated in front of the full Commission that any subscriber wishing to use a competing on-line content provider would have to pay for two subscriptions – one for @Home and one for the preferred ISP – and would have to access the preferred ISP through @Home's screen.9

To date, cable companies such as TCI have leveraged high-speed Internet access only into the market for on-line content. The merger with AT&T, however, will enable the combined company to extend its market power far more broadly, to encompass the entire bundled services market.<sup>10</sup> The incentive to do so is undeniable:

The prize could be enormous. The gatekeeper for high-speed Web surfing stands to reap revenue from all kinds of online marketing and commerce, from shopping to banking to entertainment. High-speed services could even change the future of computing itself ....<sup>11</sup>

<sup>&</sup>lt;sup>8</sup> Ken Auletta, "The Talk of the Town," The New Yorker, July 25, 1998, at 25.

<sup>&</sup>lt;sup>9</sup> Telecom Mergers: En Banc hearing on Telecom Mergers to Discuss Recent Consolidation Activities in the Telecommunications Industry, Focusing on Three of the Proposed Mergers Before the Federal Communications Commission (October 22, 1998) (Testimony of Leo Hindery, President of Tele-Communications, Inc.) ("Hindery Testimony").

<sup>&</sup>lt;sup>10</sup> The analytical basis for identifying a separate bundled services market is discussed in Section II.B below and the attached Statement of Professor Daniel F. Spulber ("Spulber Declaration"), submitted herewith as Attachment 1.

<sup>&</sup>lt;sup>11</sup> Thomas E. Weber, "Inside the Race to Grab High-Speed," *Wall Street J.*, October 22, 1998, at B1.

As if this weren't enough, garnering market power in the bundled services market could largely insulate AT&T from further competitive inroads in the long distance market and TCI from competition in the cable market.<sup>12</sup>

The merger will give AT&T/TCI unparalleled ability to act on this incentive in several respects:

- AT&T has announced its intent to provide a massive capital infusion and hasten upgrades to TCI's cable facilities and its own ISP and backbone networks, entrenching its position as the exclusive option for high-speed access for many consumers.
- Adding AT&T's unparalleled customer base to TCI's cable subscribers will give the merged entity a tremendous marketing advantage. Even if a competing bundled service offering were available, the competitor would be forced to poach customers from AT&T/TCI, while the merged entity could simply cross-market to its existing customers.
- AT&T's long distance brand name and expertise in telecommunications services will further heighten the appeal of the merged entity's bundled offering.

Importantly, these developments do not by themselves confer an unfair advantage on AT&T/TCI. It is the denial of open access to its broadband infrastructure that will enable the new company to foreclose competition in the bundled services market, impede competition in component markets, and unlawfully tie competitive and non-competitive products.

<sup>&</sup>lt;sup>12</sup> For example, at the Commission's October 22 *en banc* hearing regarding mergers, TCI's President, Leo Hindery, boasted that it was his idea to prohibit competing ISPs from providing video streaming in excess of ten minutes in length, which of course might compete with TCI's monopoly cable product. *See Hindery Testimony*.

The threat to customer choice and competition is exacerbated because there is no alternative provider of broadband access to the home in many areas served by TCI, and no such provider may emerge for several years. GTE and other local exchange carriers are newcomers in the market for broadband access. These companies are just beginning to deploy ADSL offerings, on a central office-by-central office basis, and they face substantial technical and regulatory barriers in making these services more widely available.

For example, ADSL can be provided only on loops having certain characteristics; some analysts estimate that only 60 percent or so of all loops can be made ADSL-capable. In addition, even where LEC facilities can support xDSL, those services may not necessarily provide the same throughput as the cable companies' hybrid fiber/coax networks. It is little wonder, then, that independent industry analysts predict that cable modem service will continue to enjoy a commanding market position, with four out of every five subscribers to a high-speed Internet access service in the year 2002 doing so through their cable company.<sup>13</sup>

Moreover, through an accident of historical classification, incumbent LECs, but not their cable company competitors (who are themselves the incumbent providers in the high-speed Internet access market), are subject to stringent regulations governing their offering of broadband services and bundled service packages. Among other obligations, ILECs must unbundle local distribution facilities (loops) and may be

<sup>&</sup>lt;sup>13</sup> See Comments of BellSouth Corporation, CC Docket No. 98-146, at Exhibit A "The Forrester Report: Broadband Hits Home" at 2 (filed September 14, 1998) ("*The Forrester Report"*).

required to unbundle ADSL electronics as well; must permit discounted resale of their ADSL services; must tariff those offerings; and must comply with strict rules governing their use of customer information to market advanced services. Any company with ILEC subsidiaries that wishes to provide ADSL under a somewhat less stringent regulatory regime apparently will need to establish a structurally separated affiliate — and, even then, the affiliate will remain subject to limitations that do not apply to large, vertically and horizontally integrated companies such as the merged AT&T/TCI. This regulatory asymmetry creates significant barriers to entry by ILECs and related companies.

In short, the merger will enable AT&T and TCI to shut the window of opportunity for other would-be providers of bundled service packages. Solely because of TCI's refusal to offer open access to its broadband infrastructure, the merged company will be able to sew up a major portion of the marketplace months or years before any other entrant could hope to replicate the service package using other facilities. Consumers will suffer, since they will be deprived of the competitive choices that otherwise would develop.

E. Under the Governing *Bell Atlantic/NYNEX* Standard, the Commission Cannot Approve this Merger Without Guarding Against These Profound Anticompetitive Effects.

The Commission must mitigate the adverse impact of this merger on consumers and competition. To this end, the Commission must assure through whatever means it deems appropriate that AT&T/TCI unbundle high-speed Internet access provided over its cable systems and make that offering available to all ISPs on a nondiscriminatory

basis. Such a requirement is neither ground-breaking nor unduly burdensome. These is ample precedent under Title VI of the Communications Act for obligating cable companies to provide access to their networks for certain purposes. The intent of the safeguard GTE seeks – to preserve competition and promote consumer choice – is entirely consistent with the policies underlying these statutory provisions.

F. The Merger Violates Section 652 of the Communications Act in Certain Markets.

Section 652(a) of the 1996 Act specifically prohibits local exchange carriers or their affiliates from acquiring "directly or indirectly more than a 10 percent financial interest, or any management interest, in any cable operator within the carrier's "telephone serving area." The term, "telephone service area," means an area where a common carrier provided telephone exchange service as of January 1, 1993. GTE believes that TCG, which AT&T recently acquired, provided telephone exchange service in certain TCI markets on that date. Accordingly, in these service areas, the merger violates the statute.

- II. TO THE EXTENT AT&T/TCI PROVIDES TELECOMMUNICATIONS SERVICES OVER ITS CABLE FACILITIES, THE MERGED ENTITY MUST BE REGULATED AT PARITY WITH THE ILECS.
  - A. Consistent With a Plain Reading of the Communications Act, the Merged Entity Is Subject to Sections 251(a) and (b) to the Extent it Offers Telephone Service to the Public.

Under Section 251 of the Act, Congress established a framework for the development of competitive markets for telecommunications services. In particular.

Sections 251(a) and (b) establish general duties applicable to all "telecommunications carriers" and all "local exchange carriers," respectively.

The offering of local and/or long distance service by AT&T/TCI over TCI's cable system renders that company a "telecommunications carrier" subject to Section 251(a). Under the Act, a "telecommunications carrier" is defined as an entity providing "telecommunications" for a fee directly to the public. 14 "Telecommunications," in turn, is defined as "the transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received. 15 A basic telephone service offered to customers, whether using AT&T's wireline facilities or TCI's cable facilities, clearly is "telecommunications." Consequently, AT&T/TCI must comply with the interconnection and inter operability mandates of Section 251(a).

Similarly, by providing local exchange service using TCl's cable facilities, the merged entity would be a "local exchange carrier" and, therefore, subject to Section 251(b). Once again, this result is compelled by a plain reading of the Act. A "local exchange carrier" is defined as "any person that is engaged in the provision of telephone exchange service or exchange access." "Telephone exchange service," in turn, is an intercommunicating service within a telephone exchange, or any

<sup>&</sup>lt;sup>14</sup> 47 U.S.C. §§ 153(44) (definition of "telecommunications carrier") and (46) (definition of "telecommunications service").

<sup>&</sup>lt;sup>15</sup> 47 U.S.C. § 153(43).

<sup>&</sup>lt;sup>16</sup> 47 U.S.C. § 153(26).

"comparable service provided through a system of switches, transmission equipment, or other facilities (or combination thereof) by which a subscriber can originate and terminate a telecommunications service." Voice telephony provided via cable television facilities represents such a "comparable service." Indeed, in assessing this statutory provision, the Commission has explained that Congress intended to bring within the definition of "local exchange service" the provision of service using "alternative local loops." Such a reading also is consistent with Congress' explicit recognition that cable companies represent a likely potential competitor to incumbent local telephone companies. It makes no sense to treat carriers that provide local exchange service via cable facilities differently from all other carriers using wireline facilities.

Allowing AT&T to provide telephone service on a wholly unregulated basis simply by utilizing a cable company's facilities would undermine the plain language and intent of the Act. To assure consistent treatment with LECs using non-cable facilities,

<sup>&</sup>lt;sup>17</sup> 47 U.S.C. § 153(47).

<sup>&</sup>lt;sup>18</sup> The Commission has commented that "it appears from the legislative text that Congress' redefinition of 'telephone exchange service' was intended to include in that term not only the provision of traditional local exchange service (via facilities ownership or resale), but also the provision of alternative local loops for telecommunications services, separate from the public switched telephone network, in a manner 'comparable' to the provision of local loops by a traditional local telephone exchange carrier." *Federal-State Joint Board on Universal Service*, Report to Congress, 11 CR 1312, ¶ 54 (April 10, 1998).

<sup>&</sup>lt;sup>19</sup> See Telecommunications Act of 1996, Pub. L. N. 104-104, Joint Explanatory Statement of the Committee of Conference, H.R. Rep. No. 104-458, p. 148 ("Conference Report").

AT&T/TCI must be subject to the resale, access-to-rights-of-way, number portability, and other provisions of Section 251(b).

### B. The Commission Must Assure Parity of Regulation Between AT&T/TCl and the ILECs.

As a direct result of this merger, there will be two wires into every home served by TCI (as well as the other MSOs with which AT&T is forging strategic relationships). One will be the narrowband copper loop provided by the ILEC (or a CLEC using unbundled facilities). The other will be the broadband HFC link provided by AT&T/TCI. As made clear above, AT&T/TCI will, in many cases, be the exclusive provider of broadband service to residential consumers. Moreover, through its unique ability to bundle virtually every communications product and service, it will have tremendous market power across the board – including in the local exchange and exchange access market.

There is no rational basis for distinguishing the regulatory treatment of AT&T/TCI from that of GTE or any other ILEC. To the extent the local loop is considered a bottleneck, TCI's broadband cable distribution plant is equally a bottleneck. Indeed, TCI's facilities are even more of a bottleneck, since they are the gateway to a multitude of advanced services over which AT&T/TCI will be able to exercise market power.<sup>20</sup>

<sup>&</sup>lt;sup>20</sup> As the Commission repeatedly has recognized, it must base its regulatory policies on a predictive judgment of how the market must evolve. See Applications of NYNEX Corporation and Bell Atlantic for Consent to Transfer Control of NYNEX Corporation and Its Subsidiaries, 12 FCC Rcd 19985 at ¶¶ 97-98 (1997) ("Bell Atlantic/NYNEX Order").

With this in mind, the Commission cannot lawfully permit AT&T/TCI to operate free from the obligations imposed on ILECs by Section 251(c) of the statute. If the ILECs' control of the local loop requires that they be subject to unbundling requirements, then so must AT&T/TCI. If the ILECs must provide service to resellers at a wholesale discount, then so must AT&T/TCI. And, if the ILECs must permit collocation of transmission equipment, then so must AT&T/TCI. Continuing the current disparate and discriminatory regulatory scheme, under which the ILECs are uniquely subject to these intrusive requirements, would be entirely arbitrary, would place the ILECs at an insurmountable competitive disadvantage, and would deprive consumers of the range of competitive options that Congress intended for them to enjoy.

There can be no question that the Commission has authority to extend obligations similar to those in Section 251(c) to AT&T/TCI. On numerous occasions, the Commission has seen fit to impose requirements on particular carriers or classes of carriers in order to achieve the broad objectives of the Communications Act, even when there is no statutory mandate directing the agency to do so. For example, the Commission instructed CMRS providers to offer number portability, even though these carriers are not LECs and the Section 251(b) number portability requirement by its terms applies only to LECs.<sup>21</sup> In addition, the Commission imposed unbundling

<sup>&</sup>lt;sup>21</sup> Telephone Number Portability, First Report and Order, 11 FCC Rcd 8352, ¶ 153 (1996) (holding that "[w]e possess independent authority under sections 1, 2, 4(i), and 332 of the Communications Act of 1934, as amended, to require CMRS providers to provide number portability as we deem appropriate."). Similarly, just last week, the Commission stated that it may have independent authority under sections 1, 2, and 4(i) to impose 500 number portability obligations on IXCs. See Telephone Number Portability, Second Memorandum Opinion and Order on Reconsideration, CC (Continued...)

requirements on AT&T, the BOCs, and GTE in the *Computer III/ONA* proceedings that are similar to those contained in Section 251(c)(3). And, the Commission's unrestricted resale policy has been a mainstay of the agency's pro-competitive agenda for over twenty years, even though the Commission had no explicit statutory authority (such as Section 251(b)(1)) for adopting this requirement.

The Commission thus has interpreted Sections 1, 2, 4(i), 201, and 202 in a manner that would give it broad jurisdiction to counteract the profound competitive and public interest concerns that would arise from regulating AT&T/TCI under different terms than apply to the ILECs. Just as clearly, the agency has relied on those provisions in a manner that would enable it to address these concerns by extending to the merged company requirements similar to those contained in Section 251(c). Notably, Section 251(i) of the Act expressly preserves the Commission's authority under Section 201, which was the principal source of pre-1996 Act policies aimed at promoting competition, including the Commission's unbundling, resale, and equal access mandates.

There are only two non-arbitrary choices open to the Commission. If it concludes that the ILECs retain market power, then it must conclude that AT&T/TCI will have market power as well, and must impose the same requirements on the new company as apply to the ILECs. If it concludes that AT&T/TCI will not be able to exercise market power, there is no rational way to reach the opposite conclusion

<sup>(...</sup>Continued)
Docket No. 85-116, FCC 98-275 ¶ 35 (rel. Oct. 20, 1998).

regarding the ILECs. In that case, the Commission must deregulate the ILECs in order to assure regulatory parity and permit fair competition.

If the Commission's decision is to regulate AT&T/TCI, it may elect to proceed by obtaining voluntary, enforceable commitments, by imposing conditions on the merger, or by conducting a rulemaking. The mechanism chosen is relatively unimportant; what is crucial, however, is that the merger not be approved until appropriate prophylactic measures are in place to guard against the combined company's ability to restrict customer choice and restrain competition.

- III. THE MERGER WILL IMPEDE COMPETITION IN THE MARKET FOR BUNDLED SERVICES BECAUSE TCI IS UNDER NO OBLIGATION TO PROVIDE OPEN ACCESS TO ITS BROADBAND CABLE NETWORKS.
  - A. The Merger Must be Evaluated Under the *Bell Atlantic/NYNEX*Analytical Framework.

The proposed Merger should be evaluated under the analytical framework set forth in the *Bell Atlantic/NYNEX Order*. The Commission has employed this approach in examining every subsequent, significant merger.<sup>22</sup> There is no basis for according AT&T and TCI less rigorous treatment.

<sup>&</sup>lt;sup>22</sup> See, e.g., Application of WorldCom, Inc. and MCI Communications Corporation for Transfer of Control of MCI Communications Corporation to WorldCom, Inc., CC Docket No. 97-211, FCC 98-225 (rel. September 14, 1998) (Order) ("MCI/WorldCom Order"); Application of Teleport Communications Group, Inc. and AT&T Corp. for Consent to Transfer of Control, CC Docket No. 98-24, FCC 98-169 (rel. July 23, 1998) (Order) ("AT&T/Teleport Order"); Merger of MCI Communications Corporation and British Telecommunications plc, 12 FCC Rcd 15351 (1997) (Order) ("BT/MCI Order").

Applicants nonetheless urge the Commission to forego the *Bell Atlantic/NYNEX* analysis. They claim that the proposed transaction does not involve a horizontal merger in any market and, accordingly, the Commission need not consider whether their combination would adversely affect competition.<sup>23</sup> This request misstates the scope of the Commission's review.

Even assuming that this merger has no horizontal elements – an assumption that is patently insupportable – Applicants are incorrect in stating that the Commission's authority to examine the competitive impact of proposed mergers is limited to horizontal mergers. The Commission has never articulated such boundaries on its review authority.<sup>24</sup> Rather, it has stated plainly and repeatedly – most recently in the

<sup>&</sup>lt;sup>23</sup> See Description of Transaction at 14.

<sup>&</sup>lt;sup>24</sup> Although the Commission explained that its methodology for assessing mergers is guided, in part, by the Department of Justice and Federal Trade Commission 1992 Horizontal Merger Guidelines, this document does not delineate the boundaries of the FCC's analysis. 1992 Horizontal Merger Guidelines, 57 Fed. Reg. 41552 (1992). The Commission has explained that "the structure of [its] analysis here is a more complete and fully developed articulation of potential and precluded competition issues presented by mergers during implementation of the 1996 Act" than the more limited analytical framework presented in by DOJ. Bell Atlantic/NYNEX Order at ¶ 68. Moreover, even the 1992 Merger Guidelines are not limited to analysis of horizontal impacts of mergers; rather, they set forth general legal principles of antitrust analysis and incorporate, by reference, the DOJ's earlier 1984 Guidelines relating to non-horizontal mergers. In a joint statement accompanying the release of the 1992 Merger Guidelines, the DOJ and FTC explained that they were not changing their fundamental approach to nonhorizontal mergers. "Neither agency has changed its policy with respect to nonhorizontal mergers. Specific guidance on non-horizontal mergers is provided in section 4 of the Department's 1984 Merger Guidelines, read in the context of today's revisions to the treatment of horizontal mergers." 1992 Horizontal Merger Guidelines at 41552.

AT&T/Teleport Order – that it considers both the vertical and horizontal effects of a proposed merger.<sup>25</sup> The Bell Atlantic/NYNEX analytical framework thus clearly applies.

#### B. Bundled Services Comprise a Relevant Product Market.

Applicants purport to analyze the proposed merger in the context of several individual product markets, but fail to address the merged entity's enhanced ability to foreclose competition for bundled services.<sup>26</sup> However, rather than focusing exclusively on the merger's effects in the component product markets, it is essential to recognize that the emerging market for bundled services is a distinct product market.<sup>27</sup> This "bundle" may include the following service offerings, among others:

- high-speed, broadband Internet access;
- ♦ ISP content;
- telecommunications; and
- video programming distribution.<sup>28</sup>

<sup>&</sup>lt;sup>25</sup> See Bell Atlantic/NYNEX Order at ¶ 37 ("[i]n the appropriate case, we would also examine whether the proposed merger has vertical effects that enhance market power"); AT&T/Teleport Order at ¶ 18 ("we must evaluate the likely competitive effects of the proposed merger in each of the relevant markets. In the instant case, this requires us to examine both the likely competitive effects due to the 'horizontal' aspects of the merger and the likely competitive effects due to the 'vertical' aspects of the merger"). The BT/MCI Order also contains an extensive examination of vertical competitive effects of the proposed merger. See BT/MCI Order at ¶¶ 153-204.

<sup>&</sup>lt;sup>26</sup> See Description of Transaction at 16-35.

<sup>&</sup>lt;sup>27</sup> See Spulber Declaration at 4-6.

<sup>&</sup>lt;sup>28</sup> See *Id.* at 5.

The Commission has defined a product market as a "service or group of services for which there are no close demand substitutes." In making this assessment, the Commission determines whether consumers would purchase other products in response to a price increase in the product in question. Products that are "reasonably interchangeable" by consumers, when faced with a price increase, are considered to constitute one product market. Using this well-established methodology, both the Commission and the courts have recognized that a bundle of services may, taken together, constitute a relevant market.

FCC Precedent. The Commission has considered the effects of a proposed merger on competition in the market for "bundled services" in the context of several recent mergers of telecommunications firms.<sup>31</sup> In the *Bell Atlantic/NYNEX* proceeding, for example, the Commission assessed the impact of the proposed merger on

<sup>&</sup>lt;sup>29</sup> See Bell Atlantic/NYNEX Order at ¶ 50, citing Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area, 12 FCC Rcd 15756, ¶ 49 (1997) (Second Report & Order) ("LEC Safeguard Order") (revising the FCC's product market definition methodology to follow the approach taken in the 1992 Merger Guidelines).

<sup>&</sup>lt;sup>30</sup> See Bell Atlantic Order at ¶ 50.

<sup>31</sup> See Bell Atlantic/NYNEX Order at ¶ 52, n. 116 (recognizing that "it is well established that relevant markets in antitrust cases may be bundles of services") and ¶¶ 114-120. In Bell Atlantic/NYNEX, the FCC concluded that there was insufficient evidence to support the claim made by several commenters that the merged entity would have the exclusive ability to create bundled offerings and, moreover, be able to wield market power in the market for bundled services. Id. at ¶ 120. As demonstrated below, the proposed AT&T/TCI merger is different for several reasons, foremost being that the merged entity's exclusive access to its extensive broadband network would effectively give it the exclusive ability to bundle these services during the emergence of this developing market.

competition in the market for bundled local and long distance telephone service. And, while the Commission decided not to address the impact on bundled offerings of the MCI/WorldCom merger, it acknowledged that such bundled offerings could become a distinct and relevant product market in the future.<sup>32</sup>

Supreme Court Precedent. The Supreme Court also has recognized that a bundled suite of distinct products may constitute a single product market for the purposes of its antitrust analysis. In *United States v. Philadelphia National Bank*, the Court held that the full set of products and services offered by commercial banks constitute a single "cluster of products" and, for antitrust analysis purposes, a single product market. In reaching this determination, the Court closely examined the demand substitutability of the individual component products and concluded that several non-price factors "insulated" these products from competition.<sup>33</sup> Accordingly, the court found it more useful to consider the "cluster" of products as a whole.

<sup>&</sup>lt;sup>32</sup> "Although we have determined that these four services [domestic LD, international LD, Internet backbone, and local exchange / exchange access] are the only services relevant to the instant proceeding, we expect that bundled service may, in the future, become a distinct and relevant product market." *MCI/WorldCom Order* at n.60, *citing Bell Atlantic/NYNEX Order* at ¶ 52 (noting that to the extent consumer demand for bundled service packages force carriers to offer such bundles, the bundling of local exchange and exchange access services with long distance services may well become a relevant product market even if, today, it is still nascent in most markets and nonexistent in many others).

<sup>&</sup>lt;sup>33</sup> "[T]here are banking facilities which, although in terms of cost and price they are freely competitive with the facilities provided by other financial institutions, nevertheless enjoy a settled consumer preference, insulating them, to a marked degree, from competition." *Philadelphia National Bank*, 374 U.S. 321, 356-357 (1963).

This line of analysis has been widely followed in the Circuits.<sup>34</sup> For example, the Ninth Circuit adopted the *Philadelphia National Bank* analysis in defining the relevant product market, in one instance, as the market for a full line of beauty products, rather than separating out the component products.<sup>35</sup> The court explained that the fact that certain bundled products did not have the same use for the consumer "is not as relevant [for the purposes of defining the market] as whether a 'cluster' or 'product line' of one manufacturer is reasonably interchangeable for that of another" by the end user.<sup>36</sup>

Under this regulatory and judicial precedent, bundled offerings that include communications, ISP content, high-speed Internet access and eventually telephony clearly constitute a relevant product market. Applying this demand substitutability test to the market for bundled services, it is evident that consumers do not view the component parts of service packages as substitutes for the packages themselves. Like other bundles of products recognized by courts as comprising a distinct market, a bundled telecommunications service is more than the sum of its parts. For example, in

<sup>&</sup>lt;sup>34</sup> See, e.g., A.G. Spalding & Bros., Inc. v. FTC, 301 F.2d 585, 604 (3d. Cir. 1962) (relevant market found to be an entire line of "higher priced" athletic goods, rather than a single item); JBL Enterprises v. Jhirmack Enterprises, 698 F.2d 1011, 1016-17 (9th Cir. 1983), cert. denied, 464 U.S. 829 (1983); Westman Commission Company v. Hobart International, 796 F.2d 1216 (10th Cir. 1986) cert. denied, 486 U.S. 1005 (1988). Manufacturing Research Corporation v. Greenlee Tool Company, 693 F.2d 1037 (11th Cir. 1982).

<sup>&</sup>lt;sup>35</sup> See JBL Enterprises v. Jhirmack Enterprises, 698 F.2d 1011, 1016-17 (9th Cir. 1983).

<sup>&</sup>lt;sup>36</sup> *Id.* at 1017.

explaining its decision to group commercial banking products into a single market analysis, the *Philadelphia National Bank* Court cited to the testimony of a witness who had explained the importance of non-price factors such as "[h]abit, custom, personal relationships, convenience, doing all your banking under one roof" in assessing demand substitutability of products.<sup>37</sup> In this instance, precisely these same types of factors explain the appeal of "one-stop-shopping" for bundled services.

As noted in the attached Declaration of Professor Spulber: "[c]onsideration of product and service bundles is consistent with AT&T/TCl's own business plans, the description of the relevant marketplace provided by analysts, and economic consideration of the product and service offerings that have already been made available to customers of the companies preceding the merger and are most likely to be made available after the merger is completed." Indeed, the Applicants themselves have conceded that the ability to provide such a service bundle is the driving force behind this merger, and analysts have confirmed that consumers increasingly are demanding such bundled offerings. The FCC has recognized, for example, that: "according to one recent research report, nearly 80% of American households would like to receive telecommunications and information services . . . . from a single provider,

<sup>&</sup>lt;sup>37</sup> Philadelphia National Bank, 374 U.S. at 357 n.34.

<sup>&</sup>lt;sup>38</sup> Spulber Declaration at 6.

<sup>&</sup>lt;sup>39</sup> See, e.g., Description of Transaction at 14 ("the Merger will increase the availability to consumers of a wide array of packaged . . . services—including local, long distance and wireless telecommunications service, as well as video and content-enriched high-speed Internet services").

if the overall cost remained the same."<sup>40</sup> Plainly, then the bundled services market must be considered a separate product market for purposes of assessing the competitive effects of this merger.

### C. The Relevant Geographic Market is Each Local Area Where TCI Provides High-Speed Internet Access Service.

The Commission defines the relevant geographic market as an area in which all customers would likely face "the same competitive alternatives for a [relevant] product."<sup>41</sup> Furthermore, the Commission has recognized that "discrete local areas may constitute separate relevant geographic markets, since customers in different local areas may well face different competitive alternatives."<sup>42</sup> Accordingly, the key focus is on the competitive alternatives available to consumers.

<sup>&</sup>lt;sup>40</sup> Bell Atlantic/NYNEX Order at n.222, citing Peter Meade, "Is Bundling Really Better?" America's Network, September 15, 1996

<sup>&</sup>lt;a href="http://www.americasnetwork.com/issues/091597">http://www.americasnetwork.com/issues/091597</a> research.html> (visited August 11, 1997) (revisited October 27, 1998), now at

<sup>&</sup>lt;a href="http://www.americasnetwork.com/issues/96issues/960915/091596\_">http://www.americasnetwork.com/issues/96issues/960915/091596\_</a> research.html>.

\*\*Accord\*, MTA/EMCI, "Branding and Bundling Telecommunications Services: Telephony, Video & Internet Access" (August 1996); \*\*Yankee Group, Consumer Communications Planning Service, "The 1997 Technologically Advanced Families Report" (December 1997).

<sup>&</sup>lt;sup>41</sup> Bell Atlantic/NYNEX Order at ¶ 54.

<sup>&</sup>lt;sup>42</sup> AT&T/Teleport Order at ¶ 21. As a part of the more general assessment of competitive alternatives available in distinct areas, the Commission also has examined whether the merged entity controls independent facilities in specific geographic areas. See Bell Atlantic/NYNEX Order at ¶ 54. In its LEC Safeguard Order (in which the Commission also used the approach to geographic market definition set forth in the 1992 Merger Guidelines), the Commission held that an incumbent LEC's ownership of, and control over, local exchange facilities was significant to its market power analysis. LEC Safeguard Order at ¶ 76. More specifically, the Commission held that "[i]n-region, a BOC's control over the local bottleneck may give it a competitive advantage that it (Continued...)

Applying this approach to the proposed merger, the relevant market plainly must be defined as each local area where TCl offers (or may offer) high-speed Internet access.<sup>43</sup> The bundled services will be provided over TCl's cable facilities in each individual franchise area. If AT&T/TCl acts anticompetitively, consumers in that area will be unable to switch to services provided by a LEC or cable system in a nearby town, let alone another state. Rather, the only relevant provider of competitive services is another company operating in that same local area.<sup>44</sup>

- D. TCI and AT&T Already Are Significant Providers of Bundled Services.
  - 1. TCI Is Far And Away The Leading (And Often The Only)
    Provider of Bundled Services Including High-Speed
    Internet Access Within Its Franchise Area.

TCI provides cable television service to approximately 12.7 million subscribers across the United States, passing approximately 20.9 million homes.<sup>45</sup> Currently, 11

<sup>(...</sup>Continued)
does not have out-of-region, causing the BOC to compete differently in-region than outof-region" (see LEC Safeguard Order at n.205) and concluded that "our analysis of
market power should reflect this expectation." *Id.* Accordingly, the Commission
rejected calls to use a single, national geographic market definition, deciding instead to

rejected calls to use a single, national geographic market definition, deciding instead to engage in a bifurcated analysis that recognized that BOCs effectively competed in two distinct geographic markets -- "in-region" and "out-of-region."

<sup>&</sup>lt;sup>43</sup> See Spulber Declaration at 6-7.

<sup>&</sup>lt;sup>44</sup> Further support for a local market definition comes from the Commission's conclusion that, "[i]n the case of cable, the principal geographic market is local." *Competition, Rate Deregulation and the Commission's Policies Relating to the Provision of Cable Television Service*, 67 RR 2d 1771, ¶ 48 (1990).

<sup>&</sup>lt;sup>45</sup> Description of Transaction at 6.

million TCI customers in 90 markets have access to two-way upgraded plant.<sup>46</sup> TCI is a 39% shareholder and has a majority (72%) voting interest in @Home,<sup>47</sup> "the leading provider of Internet services over the cable television infrastructure to consumers."<sup>48</sup> @Home by TCI.NET ("TCI@Home") is the exclusive cable ISP for subscribers to TCI's cable services. As a result, TCI is the sole provider of bundled services including high-speed Internet access within much of its franchise area. TCI also has commenced voice-over-Internet trials in a number of areas. Moreover, TCI not only is well-positioned to exploit the advantages that stem from its large base of cable television customers and its exclusive access to broadband last-mile facilities in its franchise areas, but it also unequivocally intends to do so.<sup>49</sup>

### 2. AT&T Has Tremendous Capabilities To Provide Bundled Services.

AT&T has the capabilities and incentives to be a significant provider of bundled services. It currently provides Internet access to approximately 1.25 million customers and owns Internet backbone facilities in 11 major cities in the United States, with over 580 points of presence.<sup>50</sup> AT&T's merger with TCG CERFnet combined the nationwide

<sup>&</sup>lt;sup>46</sup> See TCI's 1997 Annual Report, President's Letter (visited October 28, 1998) <a href="http://www.tci.com/tci.com/annualreports/tci">http://www.tci.com/tci.com/annualreports/tci</a> 97sr/hindery.html>.

<sup>&</sup>lt;sup>47</sup> Description of Transaction at 8.

<sup>&</sup>lt;sup>48</sup> Reply Comments of @Home, CC Docket No. 98-146 at 2 (filed October 8, 1998) (@Home Reply Comments).

<sup>&</sup>lt;sup>49</sup> See Description of Transaction at 7, 17-18.

<sup>&</sup>lt;sup>50</sup> See "AT&T Managed Internet Service Network Map" (visited October 28, 1998) <a href="http://www.att.com/worldnet/wmis/misb.html">http://www.att.com/worldnet/wmis/misb.html</a>>.

backbone and technical know-how of TCG with the sales, marketing, customer service, and billing infrastructures of AT&T. The company therefore is poised to become a major competitor in the provision of Internet access and services, and its plans confirm such a strategy.<sup>51</sup>

AT&T and its newly acquired subsidiary, Teleport, also have telephony facilities and customers nationwide.<sup>52</sup> AT&T has taken significant additional steps—distinct from this proposed merger—to ensure its entry into residential local telephony. For example, AT&T has recently been negotiating with Time Warner, Inc. for access to its cable network,<sup>53</sup> presumably in order to expand the geographic reach of its planned IP telephony service.

3. Other Would-Be Competitors, Such As ILECs, CLECs, And Satellite Service Providers, Face Hurdles Which Prevent Them From Providing Effective Competition to AT&T/TCl Without Open Access to TCl's Broadband Cable Facilities.

ILECs, CLECs, and satellite service providers have strong incentives to enter the lucrative bundled services market. Nonetheless, they face substantial technical hurdles to entry, particularly in the near term. Moreover, under the current regulatory structure,

<sup>&</sup>lt;sup>51</sup> See AT&T Completes TCG Merger; TCG Now Core of AT&T Local Services Network Unit (visited October 28, 1998) <a href="http://www.tcg.com/tcg/media/PRcurrent/attfinal.html">http://www.tcg.com/tcg/media/PRcurrent/attfinal.html</a>>.

<sup>&</sup>lt;sup>52</sup> AT&T currently provides residential service in at least eight states (Alaska, California, Connecticut, Georgia, Illinois, Michigan, New York and Texas). See Description of Transaction at 17.

<sup>&</sup>lt;sup>53</sup> See Eben Shapiro, "Time Warner, AT&T Discuss Phone Pact," Wall Street J., October 22, 1998, at B1.

ILECs (and their affiliates) operate under significant regulatory constraints that deter investment and innovation. As a result, none of these entities would provide effective competition to the merged entity in a time frame sufficient to ameliorate the anti-competitive and anti-consumer effects of the merger.

ILECs and CLECs. ADSL is a legitimate emerging competitor in the market for high-speed Internet access. ADSL promises a fast, affordable service aimed at residential and small business users (as well as the ISPs and long distance carriers serving these customers). Like cable modem service, ADSL provides an "always on" connection, the capacity to quickly transfer bandwidth-intensive multimedia content, and the ability to use the telephone line for voice calls while the connection to the Internet is in place. Nonetheless, there are serious technical and regulatory constraints on the ability of ADSL to be an effective near-term competitor to cable modem services.

From a technical standpoint, ADSL can be offered only on loops with certain characteristics and, depending upon carrier-specific circumstances, cannot be provisioned on 30 to 40 percent of local loops.<sup>54</sup>

From a regulatory perspective, ILECs face additional barriers to entry. Even though ILECs are new entrants in the high-speed Internet access market and, as GTE detailed in its filings in CC Docket Nos. 98-146 and 98-147,<sup>55</sup> lack control of any essential facilities, they are subject to a range of restrictions on their offering of ADSL

<sup>&</sup>lt;sup>54</sup> See Yankee Group ADSL Forum, ADSL Tutorial at 2.

<sup>&</sup>lt;sup>55</sup> See Reply Comments of GTE, CC Docket No. 98-146, at 5-6 (filed October 8, 1998); Comments of GTE, CC Docket No. 98-147, at 3-7 (filed September 25, 1998).

and related services. These requirements inflate ILECs' costs—and inhibit their ability to recover these costs—and thus inevitably will slow the pace of ILEC entry into this market.

For example, ILECs must give their competitors deeply discounted access to unbundled network elements used to provide advanced services. <sup>56</sup> Under this requirement, ILECs have the duty to unbundle underlying loops and, potentially, ADSL electronics. <sup>57</sup> ILECs also must offer advanced services to their competitors at rates well below retail. <sup>58</sup> In addition, ILECs must tariff and seek Commission approval for the prices of their ADSL services, signaling all of their competitive initiatives in advance. And, under the Commission's *Computer III/ONA* regime, GTE and the RBOCs must offer on an unbundled, non-discriminatory basis any telecommunications service (including ADSL) used by their enhanced service operations. <sup>59</sup>

<sup>&</sup>lt;sup>56</sup> Section 251(c)(3) of the Telecommunications Act of 1996, 47 U.S.C. § 251(d)(3), places upon ILECs "[t]he duty to provide . . . nondiscriminatory access to network elements on an unbundled basis . . . ."

<sup>&</sup>lt;sup>57</sup> In the *Advanced Services MO&O and NPRM*, the Commission sought comment on whether it should revise its rules regarding the local loop, asking, *inter alia*, whether it should establish additional national rules for local loops, modify the definition of a local loop, and require sub-loop unbundling.

<sup>58</sup> See Advanced Services MO&O and NPRM, ¶ 61.

Fecognizing that these constraints impede the ILECs' ability to compete in providing broadband services, the Commission has proposed that separate affiliates owned by the corporate parent of an ILEC be relieved of some of these obligations if they comply with certain conditions. However, GTE and other ILECs have explained that the proposed separation requirements would deter investment and innovation and effectively cede the advanced services market to cable companies, IXCs, and CLECs. GTE therefore proposed a "National Advanced Services Plan" that addresses competitive concerns while enabling all market participants to respond to market (Continued...)

Ironically, AT&T, which has vigorously opposed any open access requirement for cable broadband facilities, has just as vigorously clamored for even more restrictions on the ILECs' ability to offer ADSL and other advanced services. In addition, AT&T has alleged, without any factual support, that ILECs are attempting to leverage their control over local loops into a monopoly in the provision of information services and Internet access. Plainly, AT&T's regulatory agenda – preserving its own ability to deny access to facilities while loading ever more burdensome obligations on competitive broadband services offered by ILECs and their affiliates – is aimed at solidifying its control over the high-speed Internet access and bundled services markets.

Satellite Service Providers. There also are a handful of proposals to offer broadband service to consumers via satellite. None of these services, however, will provide substantial competition in the near future to a combined AT&T/TCI in the bundled services market. Indeed, AT&T itself has recognized that "[m]ost of these systems are based on still-evolving proprietary technologies, the cost, capacity, and reliability of which remains to be proven," and will not be made available to the public until the year 2002, at the earliest. For example, the satellite service proposed by SkyBridge L.L.C. could bring voice and high-speed data services to consumers via

<sup>(...</sup>Continued) incentives without undue regulatory intervention. See Comments of GTE, CC Docket No. 98-147, at iii-iv (filed September 25, 1998).

<sup>&</sup>lt;sup>60</sup> Comments of AT&T, CC Docket No. 98-146 at 9-10 (filed September 14, 1998).

<sup>61</sup> See id.

satellite dishes.<sup>62</sup> SkyBridge has yet to obtain FCC approval to construct and deploy its array of low earth orbit (LEO) satellites, however.<sup>63</sup> The only satellite service provider currently offering broadband Internet access to consumers, Hughes DirecPC/DirecTV, does not achieve nearly the same transmission speeds as cable modem service, does not offer a voice telephony component, and does not support two-way communications.<sup>64</sup>

E. AT&T/TCI Would Be Able To Exercise Market Power in the Market for Bundled Services Because of the Lack of Open Access to TCI's Broadband Cable Network.

The emerging bundled services market is competitive; no service provider or class of providers can exercise market power. Mergers like the pending GTE/Bell Atlantic transaction will greatly speed the creation of a competitive market for bundled services on a nationwide basis, as described in the public interest statement accompanying the parties' transfer application. In contrast, the merger of AT&T and TCI threatens to dramatically and adversely alter the marketplace dynamic. By combining TCI's monopoly cable system, broadband access facilities, and exclusive arrangements with @Home with AT&T's massive presence in the long distance, nationwide wireless, and ISP markets, the merger would enable the new company

<sup>&</sup>lt;sup>62</sup> See Comments of SkyBridge, CC Docket No. 98-146 at 7-8 (filed September 8, 1998).

<sup>63</sup> See id. at 3.

<sup>&</sup>lt;sup>64</sup> Hughes' Turbo Internet Software service can attain downstream transmission speeds ranging from 200 to 400 kbps. See <a href="http://www.future-furnishings.com">http://www.direcpc.com/about/a36f.html</a> (visited October 28, 1998).

rapidly to foreclose competition in this market – solely because TCI, unlike its ILEC competitors, has no current obligation to afford nondiscriminatory access to its broadband cable facilities.

1. The Merged Entity Would Be the Dominant, If Not the Sole Provider of Bundled Services in the Relevant Geographic Market.

High-speed Internet access will be the cornerstone of a company's bundled services package. Broadband technology – which has the potential for download speeds up to 100 times faster than a typical dial-up service – represents a quantum leap forward in the provision of Internet access. <sup>65</sup> Industry analysts have acknowledged, and TCI has boasted, that the enhanced speed and capacity of cable modem service will appeal greatly to consumers. <sup>66</sup>

a) The Cable MSOs Are The Incumbent Providers Of High-Speed Internet Access.

By the time that GTE and other local exchange providers began preparing their networks for the provision of broadband access, the cable MSOs had already established a significant competitive advantage. According to Harvey Morrison of the Ryan Hankin Kent research firm, "Cable modems have a 12- to 15-month head start"

<sup>&</sup>lt;sup>65</sup> See, e.g., Reply Comments of @Home at 3. See also Spulber Declaration at 10.

be the only broadband choice. To get the performance of high-speed access, many consumers will be willing to switch e-mail addresses, forgo AOL chat rooms, and accept a hard-wired start page."; @Home by TCI.NET (visited October 29, 1998) <a href="http://www.tci.net/tcinet.pgs/newframe.html">http://www.tci.net/tcinet.pgs/newframe.html</a> ("Finally, the promise of the Internet is being delivered in TCI cable communities throughout the country.").

over LECs.<sup>67</sup> For some, the head start is even greater; TCl began upgrading its cable networks in 1992<sup>68</sup> and initiated its TCl@Home high-speed Internet cable service in 1996.<sup>69</sup>

According to *The Forrester Report*, by the end of this year alone, cable modem service users are expected to outnumber ADSL users by 28 to 1. The Report concludes that, "[b]y the end of 2002, 16 million U.S. households—a quarter of all online homes—will have high-speed PC connections to the Internet." More importantly, however, the Report also projects that, in the year 2002, over 80% of broadband consumers will use a cable modem service, while fewer than 20% will use telephone company ADSL services. <sup>71</sup>

b) As A Result Of The Merger Between AT&T And TCI, The Rate Of Deployment Of Cable Modem Service In TCI's Franchise Area Will Dramatically Accelerate.

These national projections of cable's dominance of the market for high-speed Internet service, however, do not reflect the even greater rate of deployment that will occur in TCI's franchise area as a result of its merger with AT&T. As a result of this

<sup>&</sup>lt;sup>67</sup> Kevin Maney, "Net Access: Cable Modems Surge," *USA Today*, October 5, 1998, at 1B.

<sup>68</sup> Reply Comments of TCI, CC Docket No. 98-146 (October 8, 1998), at 6.

<sup>&</sup>lt;sup>69</sup> See TCI's 1997 Annual Report, TCl Group, (visited October 28, 1998) <a href="http://www.tci.com/tci.com/annualreports/tci">http://www.tci.com/tci.com/annualreports/tci</a> 97sr/tcigroup.html>.

<sup>&</sup>lt;sup>70</sup> The Forrester Report at 2.

<sup>&</sup>lt;sup>71</sup> *Id*.

merger, AT&T and TCI intend to expedite upgrades of TCI's network. Prior to the announcement of the merger, TCI was not expected to keep up with the other MSOs in terms of network upgrades. As AT&T and TCI state in the *Description of Transaction*, however, "[t]he Merger will provide TCI with financial certainty that its upgrades will proceed on schedule following the Merger, or, if possible, on an expedited basis." Thus, current predictions of cable's power over the nationwide market for high-speed Internet access probably underestimate the actual dominance that TCI will achieve in its franchise area.

c) AT&T/TCI Intends To Leverage Its Dominance In Broadband Access Into Market Power In The Bundled Services Market.

AT&T/TCI will be able to leverage its advantage in providing high-speed Internet access into market power in the bundled services market. The merged entity would be the only company able to offer high-speed Internet access as part of a bundled service offering ubiquitously throughout TCI's franchise areas. Applicants have made no secret that they intend to exploit their head start in the market for high-speed Internet access to sell their other product offerings. Indeed, in the Application itself, AT&T and TCI

<sup>&</sup>lt;sup>72</sup> See, e.g., Leslie Ellis, "AT&T Deal Cheers Street on Vendors," Multichannel News Online, June 29, 1998, (last modified October 27, 1998) <a href="http://www.multichannel.com">http://www.multichannel.com</a> (describing TCI as "admittedly a laggard in its network-upgrade plans, when compared with other MSOs").

<sup>&</sup>lt;sup>73</sup> Description of Transaction at 38; see also Convergence and Consolidation in the Entertainment and Information Industries: Hearing Before the Antitrust, Business Rights and Competition Subcommittee of the Senate Judiciary Committee, 105th Cong. 114 (July 7, 1998) (Transcript of the Testimony of Michael Armstrong, Chairman and CEO, AT&T Corp.) ("Armstrong Testimony").

predict that they will be the first carrier to offer "fully-integrated residential communications services."<sup>74</sup>

The merger will enhance TCI's ability to exploit its position as the leading, if not exclusive, provider of bundled services in the geographic market defined above. Adding AT&T's unparalleled customer base to TCI's cable subscribers will give the merged entity a tremendous marketing advantage when it begins offering Internet telephony, cable modem access and ISP content on a wider scale. Even if a competing bundled service offering were available, the competitor would be forced to poach customers from AT&T/TCI, while AT&T/TCI will be able to cross-market the new service to its existing customers. In addition, leveraging AT&T's long distance brand name and expertise in telecommunications will heighten the instant appeal of the merged entity's bundled offering. And, finally, the merged entity would benefit from

<sup>&</sup>lt;sup>74</sup> Description of Transaction at 37.

<sup>&</sup>lt;sup>75</sup> In this regard, it is noteworthy that AT&T "has committed to buy as much as \$900 million of equipment to deliver telephone service over Tele-Communications, Inc.'s cable-TV lines, even though the phone company's landmark purchase of the cable giant hasn't been completed." Rebecca Blumenstein and Leslie Cauley, "AT&T Set to Purchase Equipment to Deliver Service on TCI's Lines," *Wall Street J.*, Oct. 29, 1998, at B8.

The FCC has acknowledged the importance of brand name and reputation in assessing the competitive impact of a merger. See, e.g., Bell Atlantic/NYNEX Order at ¶ 107 ("it is costly and time-consuming to acquire the brand name assets, particularly a reputation for providing high quality telecommunications services, that differentiate the most significant participants offering mass market telecommunications services" and that such a "competitive asset [is] . . . unlikely to be quickly duplicated by smaller market participants.")

the presence of economies of scale and scope in marketing and sales.<sup>77</sup> Ordinarily, these sorts of efficiencies are strongly pro-competitive, but here, the combination with TCI's unregulated high-speed data services create a danger of market dominance.

Consequently, all of these factors will augment AT&T/TCI's ability to dominate the bundled services market at this critical, early stage in its development.

In fact, the senior executives of AT&T and TCI already have broadcast their intentions to do just that. Both C. Michael Armstrong, the Chairman and CEO of AT&T, and John Malone, the Chairman and CEO of TCI, have acknowledged that they do not intend to allow other ISPs access to TCI's upgraded facilities unless they utilize TCI's @Home service. For example, Armstrong, while testifying before a Senate subcommittee, stated that "[t]he fact that [other ISPs] will not be able to purchase . . . cable facilities, but rather offer their services through @Home, does not prevent those other ISPs from employing other media . . . to provide their Internet services." Similarly, Malone was quoted in *The New Yorker* as saying that "[America Online] provides content and transport . . . . They need to subscribe to our network to get to their customers at high speed. They have to go through us."

While TCI does not intend to allow any competing ISP to access its cable facilities, it will, for a fee, permit its customers to reach an online content provider

<sup>&</sup>lt;sup>77</sup> See Spulber Declaration at 9-10.

<sup>&</sup>lt;sup>78</sup> Armstrong Testimony at 9.

<sup>&</sup>lt;sup>79</sup> Ken Auletta, "The Talk of the Town," The New Yorker, July 25, 1998, at 25.

through the @Home service.<sup>80</sup> Thus, a customer of another ISP would have to subscribe to two service providers—its current ISP and @Home—in order to preserve its existing relationship. In other words, post-merger AT&T/TCI will maintain exclusive monopoly control over the transmission of competing ISPs' content. Obviously, any other ISP would have an extremely difficult time competing under such circumstances.

The same exclusive access requirement undoubtedly will apply to telecommunications services offered as part of the bundle. AT&T and TCI have stated that they "plan to be the first fully-integrated residential communications services provider with a national product including the ability to provide long distance, video, local, wireless, Internet and other data services on a packaged, as well as individualized, basis." However, given the two companies' resistance to permitting other ISPs to use TCI's broadband network, there is little likelihood that other telecommunications providers will be allowed to use TCI's facilities to provide competing services. As William Markey, director of marketing and business development for 3Com Corp. said, "[w]hen you look at the new company, and you tally up the services, AT&T can get to you over your TV, with long distance, with local phone, cellular phone, with high-speed data—everything short of a foot massage." 2

<sup>&</sup>lt;sup>80</sup> See Hindery Testimony at 9 ("One of the dominant OSPs, Commissioner, has a program called "Bring Your Own Access." It's called BYOA. \$9.95, you bring your provider, whoever he or she might be and for \$9.95 you then get the services of that OSP. I have specifically confirmed our willingness to support, embrace that program").

<sup>81</sup> Description of Transaction at 37-38.

<sup>&</sup>lt;sup>82</sup> Leslie Ellis, "AT&T Deal Cheers Street On Vendors," Multichannel News Online (June 29, 1998) <a href="http://www.multichannel.com">http://www.multichannel.com</a>.

### d) The Merger Raises Additional Vertical Exclusion Concerns.

The merged entity would have the incentive and ability to refuse to allow alternative providers of telecommunications and Internet access to reach end users through its cable facilities. Because these essential facilities currently are the only viable means of providing broadband Internet access and ISP content to TCI's customers, AT&T/TCI's ability to deny access to these facilities constitutes the power to exclude competition.

In his attached Declaration, Professor Spulber explains that AT&T/TCI plans to actively cultivate its role as a "gatekeeper" for a wide range of telecommunications and Internet services. In this capacity, the merged entity would be able to exclude competing ISPs from providing Internet connections to their customers. "The exclusion from cable systems has important consequences that go beyond foreclosure of access to cable customers." AT&T/TCI's business plan also is based on exclusion of all other long distance telephone carriers except AT&T's own services. Accordingly, AT&T/TCI would not only be able to dominate the nascent bundled services market, but, by denying access to competitive services, it would also have the effect of harming competition in the upstream component product markets, as well.<sup>84</sup>

<sup>83</sup> See Spulber Declaration at 13-14.

<sup>84</sup> See generally Spulber Declaration at 12-17.

## e) The Merged Entity Would Be Able To Engage In Unlawful Tying Of Services.

In addition to augmenting its dominance in the market for bundled services, the merger would enable AT&T/TCI to engage in unlawful tying conduct. The Supreme Court has explained that "the essential characteristic of an invalid tying arrangement lies in the seller's exploitation of its control over the tying product to force the buyer into the purchase of a tied product that the buyer either did not want at all, or might have preferred to purchase elsewhere on different terms." Accordingly, the potential for an impermissible tying arrangement is present to the extent that AT&T/TCI would be able to exploit its advantage in the market for cable services and high-speed Internet access by forcing its customers to purchase a tied telephone service.

Under the Supreme Court's test, the seller must have appreciable economic power in the market for the tying product to enable it to restrain trade in the market for the tied product.<sup>86</sup> The merged entity certainly would have such economic power in the market for cable services within TCl's cable franchise areas.<sup>87</sup> Moreover, if the merged

<sup>&</sup>lt;sup>85</sup> Jefferson Parish Hospital District No. 2 v. Hyde, 466 U.S. 2 (1984).

<sup>&</sup>lt;sup>86</sup> See Fortner at 620 (the issue is "whether the seller has the power, within the market for the tying product, to raise prices or to require purchasers to accept burdensome terms that could not be exacted in a completely competitive market").

<sup>&</sup>lt;sup>87</sup> The Commission has held recently that "incumbent franchised cable systems remain the primary distributors of multichannel video programming," controlling an 87% share of overall MVPD subscribership nationwide. See Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming 11 CR 147, ¶ 11 (Fourth Annual Report) (rel. January 13, 1998). Moreover, the FCC has recognized that, in a particular area, there may be no comparable alternatives to MVPD service offered by the franchise cable operator (recognizing that direct-to-home satellite service may not (Continued...)

entity were to tie telephone service to a bundled offering consisting of cable programming and Internet access, it would enjoy even greater economic power and, thus, could more easily coerce consumers to purchase telephone service.

The courts have found that an unlawful tying arrangement exists either where a seller (i) refuses to sell the tying product unless the tied product also is purchased, <sup>88</sup> or (ii) if the pricing of the individual products is so onerous that the buyer is effectively coerced to accept both products in a "discounted" package. <sup>89</sup> Both of these strategies would be available to AT&T/TCI. For example, the merged entity could either refuse to unbundle, or could artificially raise the price of unbundled cable service or high-speed Internet access and artificially depress the cost of telephone service — and effectively offer the telephone service "for free." Unlike the ILECs, whose rates are tightly regulated, the merged company would face no regulatory constraint on its ability to do so, since cable rates will be deregulated as of March 31, 1999. <sup>90</sup>

<sup>(...</sup>Continued) be a direct substitute for cable service, given the inability to provide local broadcast signals). *Id*.

<sup>&</sup>lt;sup>88</sup> See, e.g., Northern Pac. Ry. Co. v. United States, 356 U.S. 1, 6 n.4 (explaining that tying exists where a buyer is not free to take either product by itself).

<sup>&</sup>lt;sup>89</sup> See, e.g., United States v. Lowe's Inc., 371 U.S. 38 (1962); American Manufacturers Mut. Ins. Co. v. American Broadcasting-Paramount Theatres, Inc., 388 F.2d 272, 283 (2d Cir., 1967) ("the seller cannot charge substantially higher for the individual product if the price differential has the effect of conditioning the sale of the single product to the sale of the entire package and if the difference in price cannot be legitimately justified by cost considerations").

<sup>&</sup>lt;sup>90</sup> 47 U.S.C. § 543(c)(4). Given AT&T's pervasive presence in the long distance market, the merged company also might use long distance as the tying product in order to gain market power in the emerging markets for IP telephony and broadband access. The (Continued...)

2. The Market Power Enjoyed By the Merged Entity By Virtue of Their No-Access Policy Would Not Be Offset By Competitive Entry On a Timely Basis.

The Commission has recognized that the ability of other market participants to offer close substitutes on a timely basis is relevant to its assessment of the competitive impact of a proposed merger.<sup>91</sup> As explained in the *1992 Merger Guidelines*, "[a] merger is not likely to create or enhance market power or to facilitate its exercise, if entry into the market is so easy that market participants, after the merger, either collectively or unilaterally could not profitably maintain a price increase above premerger levels."<sup>92</sup> To be "easy," entry must be "timely, likely, and sufficient in its magnitude, character and scope to deter or counteract the competitive effects of concern."<sup>93</sup>

As Dr. Spulber explains, the service bundles "include services for which there are limited competitive alternatives":

Moreover, some components have achieved substantial brand recognition such as AT&T's long distance services and the @Home Internet service. AT&T/TCI could be expected to achieve substantial market power on the demand side in the absence of competitive supply responses. Such competitive responses require that other firms supply either individual components of the bundle or competing bundles that are attractive to customers. There are a number of

Applicants have supplied no information regarding how many TCI cable subscribers are presubscribed to AT&T long distance service.

<sup>(...</sup>Continued)

<sup>&</sup>lt;sup>91</sup> See, e.g., Bell Atlantic/NYNEX Order at ¶ 105.

<sup>92 1992</sup> Merger Guidelines, 57 Fed. Reg. At 41561-2, Sec. 3.0.

<sup>&</sup>lt;sup>93</sup> Id.

market and regulatory factors suggesting that such competitive supply responses will be limited thus conferring significant market power on AT&T/TCI.94

In this case, such close substitutes will not be widely offered in the near future and, therefore, AT&T/TCI would face no effective competition in the bundled services market. As noted above, none of the merged entity's likely competitors in this market is poised to provide a competitive alternative that is "timely, likely and sufficient" enough to defray AT&T/TCI's market power. As a practical matter, AT&T/TCI clearly has a vast head start with respect to facilities deployment. No ILEC, CLEC or satellite provider will enjoy ubiquitous access to customers throughout TCI's franchise area in the same manner as AT&T/TCI for a number of years. Also, because of the high cost of cable overbuilds, it is improbable that a serious challenge to AT&T/TCI's service would come from a competing cable service. Moreover, as explained above, ILECs (which otherwise would be well-positioned to offer a viable alternative to AT&T/TCI bundled offerings) face significant regulatory restraints that impede their competitive effectiveness.

The deck is plainly stacked in AT&T/TCl's favor. Accordingly, the Commission cannot count on competitors to keep AT&T/TCl's market power in check. Indeed, the merged entity's ability to dominate this nascent market will have the effect of further slowing the emergence of competitive alternatives.

<sup>94</sup> Spulber Declaration at 9.

## 3. AT&T/TCI Would Wield Market Power at a Particularly Critical Time in the Development of This Product Market

The Commission's analysis of the competitive impact of mergers is not limited to a snapshot of the current market, but is intended to assess the future impact of the merger on the changing communications landscape. While TCI's broadband Internet access service may still be in its infancy in terms of total users nationwide, sales of this service are growing explosively. TCI has exclusive access to its HFC facilities throughout its franchise areas, and almost certainly is the only carrier with any broadband facilities serving residential customers in several markets. Other providers of broadband access to consumers are unlikely to enter on a widespread basis for several years. If the merged company is permitted to bar competitors from integrating broadband access using TCI's cable networks into their bundled service offerings, there is a grave risk that new entry will be deterred and consumer choice will never develop.

<sup>&</sup>lt;sup>95</sup> The Commission has recognized that, because of the shifting regulatory and technological nature of the communications market, its analysis must be forward-looking and must anticipate the likely future competitive effects of a merger on a market. See Bell Atlantic/NYNEX Order at ¶¶ 97-98.

<sup>&</sup>lt;sup>96</sup> See, e.g., @Home Press Release, October 13, 1998, "@Home Network Reports Subscriber Base Grows to 210K Upgraded Homes Passed Increases to 10M," (visited October 29, 1998) <a href="http://www.home.net/corp/news/pr\_981013\_01.html">http://www.home.net/corp/news/pr\_981013\_01.html</a> ("@Home's cable modem subscriber base has more than quadrupled since the beginning of 1998.").

- IV. THE COMMISSION SHOULD CONDITION ITS APPROVAL OF THE MERGER TO PRESERVE CONSUMER CHOICE AND PROMOTE COMPETITION IN THE BUNDLED SERVICES MARKET.
  - A. AT&T/TCI Must Afford Competing ISPs Open,
    Nondiscriminatory Access to Its Broadband Cable Network.

As discussed in Section III, the merger of AT&T and TCI will impair competition and constrain consumer choice in the bundled services market. The Commission therefore cannot, under controlling precedent, approve the merger unless this harm is ameliorated. To this end, the Commission should require the merged company to afford competing ISPs nondiscriminatory access to TCI's broadband cable facilities. This access provision would help address concerns with the merged company's dominance in the bundled services market and would result in substantial benefits to consumers.

Allowing limited access to cable bandwidth in this manner is necessary to enable potential competitors to offer consumers alternative bundled service offerings. As explained above, the merged entity, in many cases, would be the sole provider of high-speed, broadband Internet access to the home in TCI's franchise areas and, thus, would be the only company able to offer service packages that include such a component. Without the access requirement, AT&T/TCI could effectively exclude competing ISPs from the marketplace until other broadband facilities are deployed, which is unlikely to occur in a "timely" fashion. With sparse or nonexistent competition, AT&T/TCI would be able to extract supra-competitive prices. This access requirement,

therefore, is essential to ensure that prices are reasonable and consumers enjoy a choice a service providers.

B. There is Ample Precedent Under Title VI for Requiring AT&T and TCI To Afford Open Access to their Broadband Cable Network Infrastructure.

Undoubtedly, AT&T and TCI will argue that requiring the merged company to afford competing ISPs open access to its broadband cable infrastructure is unprecedented. This is palpably incorrect. Indeed, the relief sought by GTE in this proceeding is entirely consistent with the principles underlying numerous provisions in Title VI of the Communications Act.

In several instances, Congress and the FCC have established limited access safeguards in order to assure consumer choice and promote competition in the provision of content via cable. These safeguards address concerns that cable systems may have incentives to discriminate in favor of affiliated program providers by denying access to their systems – the very same incentives that AT&T and TCI intend to act upon here. For example, Congress established "leased access" rules, which require cable operators to make access available to unaffiliated video programming providers under reasonable rates, terms and conditions.<sup>97</sup> These rules also limit the portion of channel capacity that cable operators may devote to their own affiliated programming services, requiring that a substantial portion of total channel capacity be made available

<sup>&</sup>lt;sup>97</sup> See 47 U.S.C. § 532(c).

to independent providers.<sup>98</sup> Congress has taken additional steps to prevent anticompetitive restraints by cable operators, prohibiting discrimination in the price, terms or conditions of carriage, and barring cable operators from coercing independent suppliers of video programming into granting ownership interests or exclusive distribution rights in exchange for carriage.<sup>99</sup> Finally, a separate "must-carry" regime was established by Congress to ensure that cable operators allow access to qualifying local television broadcast stations serving the community in which the system is located.<sup>100</sup>

These measures share a common underlying policy: to prevent cable companies, which enjoy a monopoly in distributing multichannel video programming, from using their market position to favor affiliated content providers. As GTE has detailed above, cable companies like TCI currently enjoy a similar monopoly in the high-speed Internet access market. These well-established Title VI policies therefore

<sup>&</sup>lt;sup>98</sup> 47 U.S.C. § 532(b)(1). For example, under these rules, the operator of a cable system with more than 100 activated channels must designate at least 15 channels to use by unaffiliated entities. 47 U.S.C. § 532(b)(1)(C). Congress explained that these requirements were designed "to promote competition in the delivery of diverse sources of video programming." 47 U.S.C. 532(a).

<sup>&</sup>lt;sup>99</sup> See 47 U.S.C. § 536; 47 C.F.R. § 76.1301 (prohibiting cable operators from engaging in certain conduct with respect to unaffiliated programming providers).

<sup>&</sup>lt;sup>100</sup> 47 U.S.C. § 534 (h)(1)(A); 47 C.F.R. Sec. 76.56(b). In addition to these cable-specific measures, Congress has expressed its preference for open transmission systems by establishing the open video systems ("OVS") regime. OVS is designed to allow multiple, competing programmers nondiscriminatory access to subscribers through a single, cable-like platform. 47 U.S.C. § 573; see also, e.g., Open Video Systems, 11 FCC Rcd. 18223 (1996).

provide a sound rationale for requiring the Applicants to afford open access by unaffiliated content and service providers to TCI's broadband network infrastructure.

In any event, § 621(b) of the Act supports the Commission's authority to impose conditions on the offering of particular services by cable companies. <sup>101</sup> That provision expressly limits the ability of "franchising authorities" to impose conditions on the offering of telecommunication services by cable companies. It extends no such bar to the Commission, however, creating a strong implication that Congress intended no limit on the agency's jurisdiction in this matter. <sup>102</sup>

C. As an Alternative, the Commission Could Defer Approving the Merger Until it is Able to Resolve These Concerns in a Rulemaking.

The Commission may decide that the proposed merger raises concerns that are better addressed in the context of a full rulemaking proceeding. GTE recognizes that the considerable risks to competition in the market for bundled services, and the associated sub-markets, posed by the merger raise a number of broader issues related to the provision of services via cable broadband facilities. Accordingly, while these concerns certainly are highlighted and made more immediate by the proposed

<sup>&</sup>lt;sup>101</sup> 47 U.S.C. § 541(b)(3).

<sup>&</sup>lt;sup>102</sup> Under the principle of "expressio unius est exclusio alterius" (i.e., the expression of one is the exclusion of the other), courts have inferred meaning from Congress' decision to include one item but omit another. See Texas Rural Legal Aid, Inc. v. Legal Serv. Corp., 940 F.2d 685, 694 (D.C. Cir. 1991); Russello v. United States, 464 U.S. 16, 22 (1983). Applying this maxim here, it follows that, by expressly limiting the local franchising entities' authority, Congress' omission of a parallel restriction with respect to the FCC should be interpreted as an implied grant of authority.

merger—and perhaps are best addressed by obtaining enforceable commitments from the Applicants—they also could be addressed on a more general basis in a rulemaking proceeding.

If such a path is chosen, however, the Commission must defer action on the merger Application until the completion of the rulemaking. Any rulemaking, no matter how expedited, takes time to complete. Permitting the merger to proceed before final rules are adopted to address the substantial competitive risks identified above would derail the development of competition in the nascent market for bundled services and harm consumers. By the time the rules were adopted, it would be too late.

#### V. THE MERGER IS STATUTORILY PROHIBITED IN AT&T'S PRE-EXISTING "TELEPHONE SERVING AREAS."

Section 652(a) of the 1996 Act prohibits a LEC and its affiliates from acquiring a cable operator in its "telephone serving area." This term is defined as an area where a common carrier provided telephone exchange services as of January 1, 1993. As the legislative history makes clear, Congress intended Section 652(a) to impose "the most restrictive provisions" of the competing House and Senate bills which gave rise to the 1996 Act, "in order to maximize competition between local exchange carriers and cable operators within local markets." GTE believes that TCG, or its predecessors in interest, provided service within the meaning of this provision in some TCI franchise

<sup>&</sup>lt;sup>103</sup> 47 U.S.C. § 572(a).

<sup>&</sup>lt;sup>104</sup> Id. § 572(e).

<sup>&</sup>lt;sup>105</sup> Conference Report at 174.

areas on January 1, 1993. Consequently, through its prior acquisition of TCG, AT&T has become a local service provider in those areas, and its acquisition of TCl's systems in those areas would violate Section 652.

#### VI. CONCLUSION

To preserve competition and consumer choice in the full range of communications product markets, including the market for bundled local and long distance telecommunications, high-speed Internet access, wireless services, ISP services, and cable services, the Commission must condition approval of this merger in two respects. First, given the predominance of the merged entity in a multitude of markets and its exclusive access to a broadband wire to the home, AT&T/TCI must be regulated in parity with the ILECs. Failure to do so would be arbitrary and antithetical to fair competition. Second, in light of the serious threat to competition in the bundled services market if AT&T/TCI is permitted to maintain its policy of denying competitors

access to its broadband cable networks, the Commission must require the merged company to afford such access on an open and nondiscriminatory basis.

Respectfully submitted,

GTE Service Corporation and its

Designated Affiliates

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Its Attorneys

October 29, 1998

#### **CERTIFICATE OF SERVICE**

I, Jacquelyn Martin, hereby certify that on this 29th day of October, 1998, I caused copies of the foregoing "Comments in Opposition of GTE" to be sent via hand-delivery or via first-class mail, postage pre-paid to the following:

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### **ATTACHMENT 1**

COMMENTS IN OPPOSITION OF GTE CS Docket No. 98-178

DECLARATION OF DANIEL F. SPULBER

FEDERAL COMMUNICATIONS COMMISSION	ON	
Washington, D.C. 20554		
In the Matter of:	)	
	)	
Joint Application of AT&T Corporation and	)	CS Docket No. 98-178
Tele-Communications, Inc. for Transfer of	)	
Control to AT&T of Licenses and	)	
Authorizations Held By TCI and Its Affiliates	)	
Or Subsidiaries	)	

## DECLARATION OF DANIEL F. SPULBER NORTHWESTERN UNIVERSITY

October 29, 1998

#### **QUALIFICATIONS**

My name is Daniel F. Spulber. I am the Thomas G. Ayers Professor of Energy Resource Management and Professor of Management Strategy at the J.L. Kellogg Graduate School of Management, Northwestern University, where I have taught since July, 1990. I received my B.A. in Economics from the University of Michigan, and my M.A. and Ph.D. in Economics from Northwestern University. Before joining the faculty of Northwestern University, I was Professor of Economics and Professor of Economics and Law at the University of Southern California. I have also taught economics at Brown University and the California Institute of Technology.

I have been ranked 6th in the United States in the listing of top 50 economists by pages published in leading journals, 1984-1993, "Trends in Rankings of Economics Departments in the U.S.: An Update, Loren C. Scott and Peter M. Mitias, *Economic Inquiry*, v. XXXIV, April, 1996, pp. 378-400.

I have conducted extensive research over the last twenty one years in the areas of regulation, industrial organization, microeconomic theory, and energy economics. In my scholarly research and consulting work, I have studied issues of regulation and competition in network industries, including telecommunications. I am the author of *Market Microstructure:* Intermediaries and the Theory of the Firm to be published in 1999 by Cambridge University Press, The Market Makers published in 1998 by McGraw Hill/Business Week Books, and Regulation and Markets published in 1989 by M.I.T. Press, coauthor of Deregulatory Takings and the Regulatory Contract published in 1997 by Cambridge University Press, and Protecting

Competition from the Postal Monopoly, with J. Gregory Sidak, published in 1996 by the American Enterprise Institute, and coeditor of Essays in the Economics of Renewable Resources, with Leonard J. Mirman, published in 1982 by Elsevier-North Holland.

I am the founding editor of the Journal of Economics & Management Strategy, published by MIT Press. I have published over 60 articles on regulation, pricing and related topics in numerous academic journals, including the Yale Journal on Regulation, the New York University Law Review, the Journal of Economic Theory, the Quarterly Journal of Economics, the Rand Journal of Economics, The Review of Economic Studies, and the American Economic Review.

I have given oral and written testimony before the Illinois Commerce Commission, the California Public Utilities Commission, the Indiana Utility Regulatory Commission, the Washington Utilities and Transportation Commission, the Federal Energy Regulatory Commission, and the Postal Rate Communications Commission, the Federal Energy Regulatory Commission, and the Postal Rate Commission. I have also testified or prepared written testimony before the Superior Court for the State on California for the County of Los Angeles, U.S. District Court for the Western District of Texas, and the United States District Court for the District of Columbia.

A copy of my curriculum vitae, which provides additional information on my qualifications and background, is attached.

#### PURPOSE OF TESTIMONY

I have been asked by GTE Service Corporation and affiliates ("GTE") to conduct a preliminary economic analysis regarding whether the combined AT&T/TCI company would be able to exercise market power in the market for bundled telecommunications and Internet services and whether there is a need for the Federal Communications Commission (the Commission) to condition the merger to permit nondiscriminatory access to cable facilities used to provide telephony and high-speed Internet access.

Based on my economic analysis, my conclusions are as follows:

- (1) Because of AT&T/TCI's ability to offer bundled video, telecommunications and Internet services in a manner denied to competitors for reasons of asymmetric regulation and related technological restrictions, AT&T/TCI would be able to exercise significant market power in a broad range of telecommunications and Internet services.
- (2) Because AT&T/TCI has the opportunity to exclude competing telecommunications and Internet access providers, and because their business plan and practices explicitly call for that exclusion, the Commission should condition the merger to permit nondiscriminatory access to cable facilities used to provide telephony and high-speed Internet access.

My statement is outlined as follows. In Section I, I outline the relevant product and geographic markets. In Section II, I consider the potential for AT&T/TCI to exercise significant market power in a broad range of telecommunications and Internet services. In Section III, I demonstrate that the combination of market power and business practices of AT&T/TCI will result in vertical exclusion of competing telecommunications and Internet access providers. Finally, in Section IV, I explain why the Commission should condition the

merger to permit nondiscriminatory access to cable facilities used to provide telephony and high-speed Internet access.

#### I. THE RELEVANT PRODUCT AND GEOGRAPHIC MARKETS

Evaluation of market power requires a definition of the firm's relevant product and geographic markets. The product and geographic market definitions should be sufficient to identify the demand and supply responses to the firm's pricing decisions. Excessively narrow definitions that overlook such responses could incorrectly identify the firm's degree of market power and bias the relevant policy response. Moreover, definitions that overlook the possibility of product bundles could also incorrectly identify the firm's market power. Accordingly, the product and geographic market definitions must be sufficient to include the types of service offerings and choices faced by customers in the marketplace.

#### A. The Relevant Product Market

The relevant product market for an analysis of the AT&T/TCI merger and its effects on competition is defined in terms of the bundles of services offered to residential and business customers. Following the Commission's definition of a product market as a "service or group of services for which there are no close demand substitutes," I define the relevant product market as bundles of telecommunications and Internet services for which there are no close substitutes.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> See Bell Atlantic/NYNEX Order at ¶ 50, citing Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area, Second Report &

Two products (or two bundles of products) are said to be substitutes in demand, if an increase price of a product (or bundle of products) causes an increase in the demand for the other product (or bundle of products). The measure of closeness is the cross elasticity of demand, which refers to the percentage change in the quantity demanded of one product (or bundle) divided by the percentage change in the price of the other product (or bundle). If the cross elasticity of demand is high, the products are said to be close substitutes. Thus, a group of products that are "reasonably interchangeable" by consumers when faced with a price increase, are considered to constitute one product market. Similarly, a group of product bundles can constitute a relevant market for purposes of an antitrust analysis. Other terms for product bundles include a cluster of products, a package of products or services, and a suite of services.

The relevant components of the potential product bundles under consideration consist of the following four categories of service offerings:

- (1) multichannel video programming distribution services
- (2) broadband Internet access
- (3) Internet content
- (4) telecommunications services.

Multichannel video programming distribution services refers to the transmission to customer premises of television programs over a cable television system. Broadband Internet access refers to the provision of a connection to the Internet that carries a large amount of data

Order, 12 FCC Rcd 15756, ¶ 49 (1997) (revising the FCC's product market definition methodology to follow the approach taken in the 1992 Merger Guidelines

at very high speeds.<sup>2</sup> Internet content refers to the provision of proprietary Internet-based information services. Telecommunications services refers to access, local, domestic and international long distance.

The relevant product market for evaluating the economic impacts of the AT&T/TCI merger involves identifying product bundles that can consist of any or possibly all of these categories of telecommunications and information services. Consideration of product and service bundles is consistent with AT&T/TCI's own business plans, the description of the relevant marketplace provided by analysts, and economic consideration of the product and service offerings that have already been made available to customers of the companies preceding the merger and are most likely to be made available after the merger is completed.

#### B. The Relevant Geographic Market

The geographic market definition should account for the ubiquity, product offerings, pricing, facilities, and competition in the marketplace. The definition of the relevant

The transmission mechanism can include such technologies as hybrid fiber/coaxial (HFC) transmission and digital subscriber line (DSL) transmission. HFC networks consist of high-capacity fiber-optic backbone transmission lines and coaxial cable connections from the backbone to the business or residential customer. DSL service consists of high-capacity fiber-optic backbone transmission lines with ordinary copper telephone line connections to the business or residential customer. xDSL refers to different variations of DSL, such as Asymmetric Digital Subscriber Line (ADSL), which provides higher data transmission capacity into the customer premises than emanating from the customer premises, High bit-rate DSL (HDSL), which has the same data transmission capacity in each direction and provides the same capacity as a T1 line, and Rate-Adaptive DSL (RADSL), which allows software to adjust the rate of data transmission.

geographic market is related to the product market definition and the identification of the products and services that are under consideration. Thus, for example, if the relevant product market for evaluating market power were retail long distance services, then the geographic market would be a single national market. When considering product bundles, however, the geographic market definition consists of the service areas covered by AT&T/TCI since the company's ability to put together product bundles is limited by the available facilities to deliver high-speed broadband communications and the constraints of service territories for some of the services included in the bundles, such as multichannel video programming distribution services. For product bundles consisting of the four categories defined above, the appropriate geographic market would be the areas where AT&T/TCI is capable of providing broadband service. As AT&T extends the offering of comparable product bundles, for example in association with the Time Warner cable system, the geographic market definition would expand appropriately.

The question at hand is whether AT&T/TCI can exercise market power for the bundles of services offered within its service areas. This entails determining whether AT&T/TCI can profitably raise the prices for its bundled service offerings above a given level without encountering substantial demand and supply responses.

# II. AT&T/TCI WILL EXERCISE SIGNIFICANT MARKET POWER IN A BROAD RANGE OF TELECOMMUNICATIONS AND INTERNET SERVICES

Determination of market power includes both demand and supply responses to the firm's price change, including potential entry. A firm's ability to raise its price profitably

depends on the extent to which the firm's customers reduce their purchases as a result, which is the own-price elasticity of the firm's demand. The price responsiveness of the firm's demand depends in part on the substitutes available to the firm's customers.

In addition, evaluating a company's market power depends on the reactions of the firm's competitors, as they alter their prices, product offerings, sales and marketing efforts, and amount of services sold. In addition, it is essential to take into account not only the supply response of the firm's existing competitors, but also the supply responses of new entrants that could be attracted to enter by the prospect of higher prices.

The product bundles that AT&T/TCI plans to offer include components that have limited substitutes available. For example, multichannel video programming distribution services has substitutes in the form of on-air television, satellite transmission, and video rentals. However, these alternatives provide only limited checks on the pricing of cable services. Restrictions on entry of competing cable alternatives suggest that cable television companies have an opportunity to exercise some market power in the provision of cable services. The pricing power of a company in the market for cable services thus depends primarily on the elasticity of customer demand. Greater numbers of competing alternatives exist for other components of the bundle such as long distance telecommunications or wireless services. For those components, the elasticity of supply can play a greater role as a constraint on market power.

As is the case with individual products, examining the market power of a company offering product bundles requires a determination of the elasticity of consumer demand for product bundles. Evaluating market power also requires a determination of the supply

responses of companies offering individual components of the bundles as well as companies that might attempt to provide comparable bundles if applicable. Economic consideration of the product bundles to be offered by A&T/TCI suggest that the company will achieve significant market power.

The components of the proposed bundles (1) to (4) as outlined above include services for which there are limited competitive alternatives. Moreover, some components have achieved substantial brand recognition such as AT&T's long distance services and the @Home Internet service. AT&T/TCI could be expected to achieve substantial market power on the demand side in the absence of competitive supply responses. Such competitive responses require that other firms supply either individual components of the bundle or competing bundles that are attractive to customers. There are a number of market and regulatory factors suggesting that such competitive supply responses will be limited thus conferring significant market power on AT&T/TCI.

First, the presence of economies of scale and scope in marketing and sales allow companies offering multiple services to lower their unit costs. AT&T/TCI will derive pricing and marketing advantages over its competitors as a result of its ability to provide bundled services in a manner denied to others. For example, regulatory restrictions such as those limiting the provision of long distance and international services, prevent competing Regional Bell Operating Companies (RBOCs) from offering comparable product bundles. GTE must incur administrative and transaction costs in complying with affiliate regulations that counterbalance potential cost gains from offering multiple services. Because they are asymmetrically applied, the affiliate regulations on independent local exchange companies

(LECs) serve as competition-reducing entry barriers. AT&T/TCI's marketing and sales cost savings from product bundling thus translate into unwarranted competitive advantages.

Second, transmission services offered over broadband transmission facilities provide clear advantages for customers seeking telecommunications and Internet access services. AT&T/TCI's service will feature speeds of up to 100 times faster than standard dial-up services offered by telecommunications and Internet Service Providers. Moreover, their service will permit bandwidth-intensive multimedia content with enriched entertainment features such as video and interactive computer games. The high-bandwidth system will further allow "always on" service without the inconvenience of repeatedly logging on to connect to the Internet. Although, narrowband can be used to provide services that are substitutes in demand for broadband when relative prices compensate for quality differences, services that are provided using broadband technology have substantial quality advantages all other things equal. Accordingly, when these enhanced services are offered as part of product bundles that cannot readily be assembled by competitors, AT&T/TCI will derive competitive advantages as a result.

Such technological advances are presumably available to competing LECs and competitive local exchange companies (CLECs) if they were to construct a comparable transmission system. However, asymmetric regulations again restrict the response of competitors. Under the 1996 Telecommunications Act, the LECs are subject to regulatory incumbent burdens that are not placed on new entrants.<sup>3</sup> For example, ILECs must give their

<sup>&</sup>lt;sup>3</sup> See Daniel F. Spulber and J. Gregory Sidak, <u>Deregulatory Takings and the Regulatory Contract</u>: The Competitive Transformation of Network Industries in the United States, New

competitors access to unbundled network elements including those used to provide advanced services and possibly advanced digital subscriber lines (ADSL).<sup>4</sup> ILECs also must offer advanced services to their competitors at below-retail rates and seek Commission approval for the prices of their ADSL services. Moreover, under the Commission's Computer III/ONA regime, GTE and the RBOCs must offer on an unbundled, non-discriminatory basis any telecommunications service (including ADSL) used by their enhanced service operations. Therefore, the LECs and (CLECs) face technological disadvantages in competing with bundles of services to be provided by cable networks that cannot be overcome as a consequence of asymmetric regulatory restrictions

Third, AT&T/TCI derives advantages from one-stop shopping convenience in ordering, service activation, billing, and establishing transmission connections. The convenience of bundling increases demand for bundling on the part of business and residential customers seeking convenience and lower transaction costs. Bundling is advantageous for customers if it eliminates the need to shop among many separate providers of multichannel video programming distribution services, high-speed Internet access, Internet content, and various telecommunication services. Again, such advantages are denied competitors who cannot offer similar bundles. Moreover, regulatory considerations prevent two or more

York: Cambridge University Press, 1997.

<sup>&</sup>lt;sup>4</sup> Section 251(c)(3) of The Telecommunications Act of 1996, 47 U.S.C. § 251(c)(3), places on ILECs "[t]he duty to provide . . . nondiscriminatory access to network elements on an unbundled basis . . . . "

<sup>&</sup>lt;sup>5</sup> See Advanced Services MO&O, ¶ 61

competitors of AT&T/TCI from providing similar bundles through contracting arrangements. Perhaps of greater significance, vertical restrictions inherent in the AT&T/TCI business plan prevent LECs from assembling product bundles in coordination with other telephony or ISP companies who are denied access to AT&T/TCI transmission facilities. As a consequence, AT&T/TCI will have significant market power in the market for bundled services within its service areas.

## III. AT&T/TCI WILL EXCLUDE TELECOMMUNICATIONS AND INTERNET ACCESS PROVIDERS

Through its upgraded facilities and product bundling arrangements, AT&T/TCI makes itself the *gatekeeper* for a wide range of telecommunications and Internet services. The previous section identified significant horizontal effects from the AT&T/TCI merger. In this section, I consider whether the merger and combined companies' business plan raise concerns about vertical exclusion in markets for goods and services that comprise the bundles offered by the merged company.

According to a press release of AT&T and TCI of June 24, 1998 announcing the merger, "AT&T will combine its current consumer long-distance, wireless and Internet services units with TCI's cable, telecommunications, and high-speed Internet business to create a new subsidiary-AT&T Consumer Services." The press release quotes C. Michael Armstrong, chairman and CEO of AT&T as observing: "AT&T Consumer Services will bring to people's homes the first fully integrated package of communications, electronic commerce and video entertainment services." AT&T notes that its consumer businesses include "the

nation's leading long-distance services, with annual revenues of approximately \$23 billion, and the most broadly available wireless services, with annual revenues greater than \$3 billion," and that AT&T is "the world leader in business communications services." AT&T further observes that AT&T WorldNet services is "one of the industry's leading dial-up Internet access services" and @Home is "the leading provider of high-speed Internet access and content services" with affiliate agreements with cable companies that pass 50 million homes, including the 33 million passed by TCI. AT&T's acquisition of TCI and a controlling interest in @Home led the Cable News network to observe that "the 800-pound gorilla has entered the room."

According to its own website, the cable-based ISP @Home has exclusive access to over half the homes passed by cable in the US:

Its partnerships with TCI, Comcast Corporation, Cox Communications, Cablevision Systems Corp., InterMedia Partners, Marcus Cable, Rogers Cablesystems, Shaw Communications, Cogeco, Bresnan Communications, Jones Intercable, Garden State Cable, Insight Communications, Midcontinent Cable Company, and Century Communications provide exclusive access to more than half of all homes passed by cable in North America; additional affiliated cable operator agreements will further increase coverage.

Exclusive access means that these cable systems only use @Home as their Internet access provider. This denies cable customers the choice of ISPs to obtain Internet access over their cable company's broadband network.

The market impact of that exclusive access bears emphasis. The exclusion from cable

<sup>&</sup>lt;sup>6</sup> John Frederick Moore, "ISPs to feel AT&T Effects," June 24, 1998, CNN Financial Network, http://www.cnnfn.com.

systems has important consequences that go beyond foreclosure of access to cable customers. There are a significant number of ISPs: Boardwatch Magazine's Winter 1998 Directory of Internet Service Providers lists 4,470 ISPs. Much of the ISP industry relies on their customers reaching them over facilities provided by telecommunications systems. By its exclusive reliance on its @Home ISP, AT&T/TCI effectively excludes these many ISPs from providing Internet connections to their cable customers. Thus, the many companies that provide ISP services cannot compete for this important segment of the customer market.

Moreover, the exclusive access of @Home to customers of the cable companies may impact the rapidly growing market for Internet content as well. Many ISPs such as America Online provide proprietary content along with Internet connections. AT&T/TCI customers wishing to obtain proprietary Internet content from such ISPs must essentially pay twice, once for the @Home service and again for the Internet content service. It bears emphasis that @Home is not just an Internet access provider, it is also a content provider. The exclusive position that it holds on many cable systems (TCI, Comcast Corporation, Cox Communications, Cablevision Systems Corp., InterMedia Partners, Marcus Cable, Rogers Cablesystems, Shaw Communications, Cogeco, Bresnan Communications, Jones Intercable, Garden State Cable, Insight Communications, Midcontinent Cable Company, and Century Communications) should raise great concerns over monopolization of proprietary content. This would be the equivalent of having a single company controlling all cable channels.

For any single company such as AT&T/TCI to become a gatekeeper for Internet access and content raises substantial concerns about the development of Internet commerce and communications. Because the AT&T/TCI business plan is predicated on exclusion of all ISPs

except its own @Home service, the company has become the key broadband Internet portal controlling access to shopping, banking, communications, information, and entertainment. A portal is a term for a major gateway to the Internet, the virtual computer network equivalent of the best real estate location. @Home is well aware of these implications. The company "provides consumers with a gateway to compelling multimedia and electronic commerce offerings on the Internet" and already refers to itself as "the leading broadband Internet portal."

Portals play a significant role in Internet commerce by providing business referrals that generate sales and business contacts for affiliated companies, including retail, travel and financial companies. The control over access to Internet commerce and associated content by a single company can be expected to generate high fees and commissions for that company. Such unity of control can further be expected to restrict the choices of products and services available to cable customers seeking to do business over the Internet. These developments could cause damage to the evolution of Internet commerce and communications.

The exclusivity of AT&T/TCI for Internet access and Internet content does not end there. It extends to telephony services as well. The AT&T/TCI business plan is based on exclusion of other telephone service providers except AT&T. Currently, customers of ILECs and CLECs have access to a wide variety of other telecommunications service providers. If these customers were to abandon the LECs in favor of bundled services provided by AT&T/TCI, they would then face a restriction on their choice of telecommunications services.

<sup>&</sup>lt;sup>7</sup> @Home Network News Release, October 1, 1988 at http://www.home.net/corp/news.

Such a development would impact competition in markets for telecommunication services.

The negative impact of exclusionary practices is mitigated by the presence of competing alternatives, in particular, the access services provided by telecommunications-based systems. The problem is that the competing alternatives are hobbled by the existence of asymmetric regulations that tend to constrain the LECs' marketing and technological innovation efforts. Asymmetric regulations limit the LECs ability to bundle services, as I have already noted. Moreover, asymmetric regulations threaten to retard the development of competing broadband alternatives such as xDSL while raising the costs of implementing and providing these technologies.

Presumably, the LECs could provide partial product bundles using different transmission and distribution facilities by jointly advertising, marketing and billing telecommunications services with high-speed Internet access (not including cable programming distribution, long distance and international service). Such partial bundles are hindered by the effects of asymmetric regulation. Alternatively, these services could be provided in combination with cable services. However, they are precluded from doing so by the exclusionary practices of AT&T/TCI since customers will not be able to access competing telephony providers or ISPs. This situation calls for regulatory relief so that telephone companies, ISPs and other companies have a fighting chance.

# VI. THE COMMISSION SHOULD CONDITION THE AT&T/TCI MERGER TO PERMIT NONDISCRIMINATORY ACCESS TO ITS FACILITIES

My economic analysis suggests the following conclusions. Asymmetric regulation and related technological restrictions effectively deny competitors of AT&T/TCI the ability to offer comparable bundled broadband telecommunications and Internet access services. Restrictions placed on LECs combined with a notable absence of similar restrictions on AT&T/TCI, will allow AT&T/TCI to exercise significant market power in a broad range of telecommunications and Internet services. This situation raises particular concerns because AT&T/TCI evidently plans to take advantage of the opportunity to exclude competing ISPs and telecommunications service providers.

The AT&T/TCI merger without such conditions would have both horizontal and vertical effects on competition. The company would attain market power in bundled telecommunications while restricting competitor access for telecommunications companies, Internet service providers and potentially, Internet content providers. To avoid this outcome, the Commission should condition the merger to permit nondiscriminatory access to cable facilities used to provide telecommunications services and high-speed Internet access.

To achieve the full benefits of market competition in telecommunications and information services, regulation must avoid distorting economic incentives as much as possible. Regulations should allow incumbents and entrants an equal opportunity to compete.

Moreover, regulators must remain impartial, without favoring particular technologies,

products and service offerings, or individual companies.<sup>8</sup> The combination of regulations on LECs created by the 1996 Telecommunications Act and the absence of comparable regulations on the broadband services to be offered by AT&T/TCI threatens to distort economic incentives of market participants, does not provide other companies in the market place with an equal opportunity to compete with AT&T/TCI, and tends to favor one technology and set of product offerings over others. Placing nondiscriminatory open access obligations on AT&T/TCI would help to restore competitive neutrality and reduce the vertical exclusion effects of the merger.

<sup>&</sup>lt;sup>8</sup> See J. Gregory Sidak and Daniel F. Spulber, "Deregulation and Managed Competition in Network Industries," 15 Yale Journal on Regulation 117 (Winter 1998).

I declare under penalty of perjury that the foregoing is true and correct.

Daniel F. Spulber

Executed on October 29, 1998.

#### DANIEL F. SPULBER

## Biographical Sketch

Daniel F. Spulber is the Thomas G. Ayers Professor of Energy Resource Management, Professor of Management Strategy, and Professor of Managerial Economics and Decision Sciences at the J. L. Kellogg Graduate School of Management, Northwestern University, where he has taught since 1990. He received his Ph.D. in economics in 1979 and his M.A. in economics in 1976 from Northwestern University, and his B.A. in economics in 1974 from the University of Michigan. Spulber has taught at Brown University, the University of Southern California, and the California Institute of Technology.

Spulber was ranked 6th among economists in the United States in the listing of top 50 economists by pages published in leading journals, 1984-1993, in "Trends in Rankings of Economics Departments in the U.S.: An Update, Loren C. Scott and Peter M. Mitias, Economic Inquiry, v. XXXIV, April, 1996, pp. 378-400. Spulber has received eight National Science Foundation grants for economic research. Spulber is the founding editor of the Journal of Economics & Management Strategy published by M.I.T. Press.

Spulber's research is in the areas of Industrial Organization, Microeconomic Theory, Management Strategy, Regulation, and Energy Economics. He has published numerous journal articles in economics journals and law reviews, including the American Economic Review, Quarterly Journal of Economics, Review of Economic Studies, Journal of Economic Theory, Rand Journal of Economics, International Economic Review, Journal of Economic Perspectives, Columbia Law Review, New York University Law Review, Harvard Journal on Law and Public Policy, and Yale Journal on Regulation.

Spulber is the author of Market Microstructure: Intermediaries and the Theory of the Firm, to be published in 1999 by Cambridge University Press, The Market Makers: How Leading Companies Create and Win Markets, published in1998 by McGraw-Hill/ Business Week Books, Deregulatory Takings and the Regulatory Contract: The Competitive Transformation of Network Industries in the United States, with J. Gregory Sidak, published in 1997 by the Cambridge University Press, Protecting Competition from the Postal Monopoly, with J. Gregory Sidak, published in 1996 by the American Enterprise Institute, Regulation and Markets published in 1989 by M.I.T. Press, and editor of Essays in the Economics of Renewable Resources, with Leonard J. Mirman, published in 1982 by Elsevier-North Holland.

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## PROFESSIONAL APPOINTMENTS

Professor of Managerial Economics, Department of Managerial Economics and Decision Sciences, June 1, 1993 to present.

Thomas G. Ayers Chair in Energy Resource Management and Professor of Management Strategy, Department of Management and Strategy, J.L. Kellogg Graduate School of Management, Northwestern University, June 1, 1990 to present.

Visiting Professor of Economics, California Institute of Technology, September, 1989 to December, 1989.

Professor of Economics and Law, University of Southern California Law Center, September, 1988 to May, 1990.

Professor of Economics, University of Southern California, September, 1988 to May, 1990.

Visiting Associate Professor of Economics, California Institute of Technology, January, 1988 to June, 1988.

Associate Professor of Economics, with tenure, University of Southern California, September, 1984 to August, 1988.

Research Associate, Institute for Marine and Coastal Studies, University of Southern California, July, 1982 to June, 1984.

Assistant Professor of Economics, University of Southern California, July, 1982 to August, 1984.

Assistant Professor of Economics, Brown University, September, 1978 to June, 1982.

## **EDUCATION**

Ph.D., Economics, Northwestern University, 1979

Dissertation: <u>Studies in Adaptive Investment Planning: Research and Development, Rolling Plans and Renewable Resources.</u>

M.A., Economics, Northwestern University, 1976

B.A., Economics, University of Michigan, 1974

## **TEACHING**

Sidney J. Levy Teaching Award for excellence in teaching for the 1995-1996 academic year

# **COURSES**

## Current teaching:

Management of International Business (MBA)

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# Other management courses taught:

Strategy and Organization (MBA)

Public Policy and Management Strategy (MBA and Executive Management Program)

# Economics courses taught:

Microeconomic Theory (Undergraduate and PhD)

Law and Economics (Undergraduate and PhD)

Industrial Organization (Undergraduate and PhD)

Regulation (PhD)

Energy and Resource Economics (Undergraduate and PhD)

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## JOURNAL EDITING

Founding editor, <u>Journal of Economics & Management Strategy</u>, M.I.T. Press, 1991 - present.

Papers and Proceedings of the American Economic Association, American Economic Review, May 1980, coeditor.

## **PUBLICATIONS**

## **BOOKS**

Market Microstructure: Intermediaries and the Theory of the Firm, New York: Cambridge University Press,1999, xxx + 368p., ISBN 0-521-65025-9 (hardback) and 0-521-65978-7 (paperback).

The Market Makers: How Leading Companies Create and Win Markets, New York: McGraw Hill/ Business Week Books, 1998, x + 314p., ISBN 0-07-060584.

Deregulatory Takings and the Regulatory Contract: The Competitive Transformation of Network Industries in the United States, with J. Gregory Sidak, Cambridge University Press, 1997, xi + 631p., ISBN 0-521-591597 (hardback and paperback).

<u>Protecting Competition from the Postal Monopoly</u>, with J. Gregory Sidak, Washington, D.C.: American Enterprise Institute, 1996, ix + 195p., ISBN 0-8447-3950-2.

Regulation and Markets, Cambridge, Mass., M.I.T. Press, 1989, xviii + 690 p., ISBN

0-262-19275-6.

Essays in the Economics of Renewable Resources, Edited with Leonard J. Mirman, Amsterdam, Elsevier-North Holland Publishing Co. 1982, xii + 286 p., ISBN 0-444-86340-0.

#### ARTICLES

- 62. Cyberjam: Internet Congestion of the Telephone Network, with J. Gregory Sidak, <u>Harvard Journal on Law and Public Policy</u>, 21 (2), Spring, 1998, pp. 327-394.
- 61. Deregulation and Managed Competition in Network Industries, with J. Gregory Sidak, Yale Journal on Regulation, 15, Winter, 1998, pp. 117-148.
- 60. Network Access Pricing and Deregulation, with J. Gregory Sidak, <u>Industrial</u> and <u>Corporate Change</u>, 6: 4,1997, pp. 757-782.
- 59. Municipalization: Opportunism and Bypass in Electric Power, with Michael Doane, Energy Law Journal, 18: 2, 1997, pp. 333-361.
- 58. Givings, Takings, and the Fallacy of Forward-Looking Costs, with J. Gregory Sidak, New York University Law Review, 72, October, 1997, pp. 1068-1164.
- 57. The Tragedy of the Telecommons: Government Pricing of Unbundled Network Elements Under the Telecommunications Act of 1996, with J. Gregory Sidak, Columbia University Law Review, 97, 1997, pp. 1201-1281.
- 56. Monopoly and the Mandate of Canada Post, with J. Gregory Sidak, <u>Yale Journal on Regulation</u>, 14, Winter 1997, 1 84.
- Dynamic Retail Price and Investment Competition, with Kyle Bagwell and Gary Ramey, RAND Journal of Economics, 28, Summer, 1997, 207-227.
- 54. Capital Structure with Countervailing Incentives, with Yossef Spiegel, <u>RAND</u> <u>Journal of Economics</u>, 28, Spring, 1997, pp. 1-24.
- 53. Market Making by Price-Setting Firms, <u>Review of Economic Studies</u>, 1996, 63, pp. 559-580.
- 52. Deregulatory Takings and Breach of the Regulatory Contract, with J. Gregory Sidak, New York University Law Review, 71, October 1996, pp. 851-999.

- 51. Market Microstructure and Intermediation, <u>Journal of Economic Perspectives</u>, volume 10, Summer 1996, pp. 135-152.
- 50. Deregulating Telecommunications, <u>Yale Journal on Regulation</u>, 12, Winter, 1995, pp. 25-67.
- 49. Bertrand Competition when Rivals' Costs are Unknown, <u>Journal of Industrial</u> <u>Economics</u>, 43, 1995, pp. 1- 12.
- 48. Pricing and the Incentive to Invest in Pipelines After Great Lakes, <u>Energy Law Journal</u>, 15, 1994, pp. 377-404.
- 47. Open Access and the Evolution of the U.S. Spot Market for Natural Gas, with Michael Doane, <u>Journal of Law and Economics</u>, 37, October, 1994, pp. 477-517.
- 46. The Capital Structure of a Regulated Firm, With Yossef Spiegel, <u>RAND</u> Journal of Economics, 25, Autumn, 1994, pp.424-440.
- 45. Economic Analysis and Management Strategy: A Survey Continued, <u>Journal of Economics & Management Strategy</u>, 3, Summer, 1994, 355-406.
- 44. Contested Mergers and Equilibrium Antitrust Policy, with David Besanko, <u>Journal of Law, Economics & Organization</u>, 9, Spring, 1993, pp. 1 29.
- 43. Monopoly Pricing of Capacity Usage Under Asymmetric Information, <u>Journal of Industrial Economics</u>, 41, June, 1993, pp. 1-17.
- 42. Monopoly Pricing, <u>Journal of Economic Theory</u>, 59, February, 1993, pp.222-234.
- 41. Economic Analysis and Management Strategy: A Survey, <u>Journal of Economics & Management Strategy</u>, 1, Fall, 1992, pp. 535-574.
- 40. Sequential Equilibrium Investment by Regulated Firms, with David Besanko, RAND Journal of Economics, Summer, 1992, 23, pp. 153-170.
- 39. Optimal Nonlinear Pricing and Contingent Contracts, <u>International Economic Review</u>, November 1992, 33, pp. 747-772.
- 38. Capacity-Contingent Nonlinear Pricing by Regulated Firms, <u>Journal of Regulatory Economics</u>, 4, 1992, pp. 299-319.

- 37. Delegation, Commitment, and the Regulatory Mandate, with David Besanko, <u>Journal of Law, Economics, and Organization</u>, 1992, 8, pp. 126-154.
- 36. Auctions and Contract Enforcement, <u>Journal of Law, Economics, and Organization</u>, 6 Fall 1990, pp. 325-344.
- 35. Are Treble Damages Neutral? Sequential Equilibrium and Private Antitrust Enforcement, with David Besanko, <u>American Economic Review</u>, 1990, 80 September, pp. 870-887.
- 34. Managing Procurement Auctions, with Sudipto Dasgupta, <u>Journal of Information Economics and Policy</u>, 4, 1989/90, pp. 5-29.
- 33. Is Competitive Entry Free?: Bypass and Partial Deregulation in Natural Gas Markets, with Paul W. MacAvoy and Bruce E. Stangle, <u>Yale Journal on Regulation</u>, 6 Summer, 1989, pp. 209-247.
  - Is Competitive Entry Free?: Bypass and Partial Deregulation in Natural Gas Markets, with Paul W. MacAvoy and Bruce E. Stangle, Reprinted in the <u>Public Utilities Law Anthology</u>, 12, 1989.
- 32. Delegated Law Enforcement and Noncooperative Behavior, with David Besanko, <u>Journal of Law</u>, <u>Economics and Organization</u>, 5, Spring 1989, pp. 25-52.
- 31. Antitrust Enforcement Under Asymmetric Information, with David Besanko, Economic Journal, 99, June 1989, pp. 408-425.
- 30. Product Variety and Competitive Discounts, <u>Journal of Economic Theory</u>, 48, August 1989, pp. 510-525.
- 29. The Second Best Core, <u>International Economic Review</u>, 30, August, 1989, pp. 623-631.
- 28. Optimal Environmental Regulation Under Asymmetric Information, <u>Journal of Public Economics</u>, 35, 1988, pp. 163-181.
- 27. Products Liability in a Contestable Market, Economica, 55, 1988, pp. 333-341.
- 26. Bargaining and Regulation with Asymmetric Information about Demand and Supply, <u>Journal of Economic Theory</u>, 44, April, 1988, pp. 251-268.
- 25. Menu Costs and the Neutrality of Money, with Andrew Caplin, Quarterly

<u>Journal of Economics</u>, 102, November, 1987, pp. 703-725. Menu Costs and the Neutrality of Money, with Andrew Caplin, Reprinted in N. Gregory Mankiw and David Romer, eds., <u>The New Keynesian Economics</u>, volume 1, Cambridge, MA: M.I.T. Press, pp. 87-110.

Menu Costs and the Neutrality of Money, with Andrew Caplin, Reprinted in Eytan Sheshinski and Yoram Weiss, eds., Optimal Pricing. Inflation, and the Costs of Price Adjustment, MIT Press, 1993, pp. 217-240.

- 24. Value Allocation with Economies of Scale, <u>Economic Letters</u>, 21, 1986, pp. 107-111.
- 23. Second-Best Pricing and Cooperation, <u>RAND Journal of Economics</u>, 17, Summer, 1986, pp. 239-250.
- 22. Economic Planning with Rolling Horizons, <u>International Journal of Development Planning</u>, 1, October-December, 1986, pp. 433-441.
- 21. Fishery Regulation With Harvest Uncertainty, with Leonard J. Mirman, International Economic Review, 26, October 1985, pp. 731-746.
- 20. Capacity, Output and Sequential Entry: Reply, <u>American Economic Review</u>, 75, 1985.
- 19. Risk Sharing and Inventories, <u>Journal of Economic Behavior and Organization</u>, 6, 1985, pp. 55-68.
- 18. Effluent Regulation and Long Run Optimality, <u>Journal of Environmental</u> <u>Economics and Management</u>, 12, 1985, pp. 103-116.
  - Effluent Regulation and Long Run Optimality, Reprinted in <u>The Economics of the Environment</u>, Wallace E. Oates, ed. Edward Elgar Publishing, Ltd.
- 17. The Multi-Cohort Fishery Under Uncertainty, <u>Journal of Marine Resource</u> Economics, 1, 1985, pp. 265-282.
- 16. Fisheries and Uncertainty, in A.D. Scott (ed.), <u>Progress in Natural Resource Economics</u>, Oxford University Press, 1985.
- 15. The Cost Function with Imperfectly Flexible Capital, with Robert A. Becker, Economic Letters, 16, 1984, pp. 197-204.
- 14. Uncertainty and Markets for Renewable Resources, with Leonard J. Mirman,

- Journal of Economic Dynamics and Control, 8, 1984.
- 13. Multiproduct Two Part Tariffs, with Paul Calem, <u>International Journal of Industrial Organization</u>, 2, 1984, pp. 105-115.
- 12. Scale Economies and Existence of Sustainable Monopoly Prices, <u>Journal of Economic Theory</u>, 34, October 1984, pp. 149-163.
- 11. Nonlinear Pricing, Advertising and Welfare, <u>Southern Economic Journal</u>, April, 1984, pp. 1025-1035.
- 10. Competition and Multiplant Monopoly with Spatial Nonlinear Pricing, International Economic Review, 25, June 1984, pp. 425-439.
- 9. Regulatory Lag and Deregulation with Imperfectly Adjustable Capital, with Robert A. Becker, <u>Journal of Economic Dynamics and Control</u>, 6, June, 1983, pp. 137-151.
- 8. Pulse Fishing and Stochastic Equilibrium in the Multicohort Fishery, <u>Journal of Economic Dynamics and Control</u>, 6, 1983, pp. 309-322.
- 7. Adaptive Harvesting of a Renewable Resource and Stable Equilibrium, in L.J. Mirman and D.F. Spulber, eds., Essays in the Economics of Renewable Resources, North-Holland, 1982, pp. 117-139.
- 6. Renewable Resources: A Selective Survey, in L.J. Mirman and D.F. Spulber eds., Essays in the Economics of Renewable Resources, North-Holland, 1982, pp. 3-26.
- 5. Spatial Nonlinear Pricing, <u>American Economic Review</u>, Vol. 71, No. 5, December 1981, pp. 923-933.
- 4. Capacity, Output and Sequential Entry, <u>American Economic Review</u>, Vol. 71, No. 3, June 1981, pp. 503-514.
- 3. Equilibrium and Optimality with Rolling Plans, with David Easley, International Economic Review, Vol. 22, February 1981, pp. 79-103.
- 2. Research, Development and Technological Change in a Growing Economy, Energy Economics, Vol. 2, No. 4, October 1980, pp. 199-207.
- 1. Noncooperative Equilibrium with Price Discriminating Firms, <u>Economic Letters</u>, 4, 1979, pp. 221-227.

#### COMPLETED BOOKS AND PAPERS

Intermediation and the Nature of the Firm, Northwestern University Discussion Paper, August, 1998.

Market Microstructure and Incentives to Invest, Northwestern University Discussion Paper, March, 1998.

Shakeouts, Northwestern University Discussion Paper, February, 1995, under revision.

## **GRANTS AND AWARDS**

Ameritech Foundation, <u>Competitive Strategy and Shakeouts in Telecommunications</u>, June-August, 1995.

National Science Foundation, Grant No. SES-90-96205, <u>Sequential Models of Regulation with Limited Commitment</u>, January 1990-June 1992.

National Science Foundation, Grant No. SES-86-08115 Project Renewal, <u>Government Regulation and Procurement Under Incomplete Information</u>, July 1987-June 1988.

National Science Foundation, Grant No. SES-86-08115, <u>Government Regulation and Procurement Under Incomplete Information</u>, July 1986 to June 1987.

Sea Grant, Economic Analysis for Resource Regulation, October, 1983 to October, 1985.

National Science Foundation, Grant No. SES-82-19121, <u>Risk Sharing and Retail Inventories</u>, September 1983 to June 1985.

National Science Foundation, Grant No. SES-82-09219, <u>Competition and Welfare with Nonlinear Pricing</u>, Project Renewal, August 1982 to January 1984.

National Science Foundation, Grant No. SES-81-05852, Competition and Welfare with Nonlinear Pricing, August 1981 to January 1983.

National Science Foundation, Grant No. SES-79-14386, <u>The Economics of Renewable Resource Management</u>, Conference Grant, October 1979 to March 1981.

National Science Foundation, Grant No. SES-79-07201, <u>Stochastic Optimization and Economic Dynamics</u>, July 1979 to July 1980.

Brown University Faculty Development Research Grant, <u>Application of Nonlinear Pricing</u>, August, 1981 to July 1982.

## **HONORS**

Ranked 6th in the United States in the listing of top 50 economists by pages published in leading journals, 1984-1993, "Trends in Rankings of Economics Departments in the U.S.: An Update, Loren C. Scott and Peter M. Mitias, Economic Inquiry, v. XXXIV, April, 1996, pp. 378-400.